

Table with exchange rates for various countries including Austria, Bahrain, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, India, Japan, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mexico, Monaco, Netherlands, New Zealand, Norway, Philippines, Portugal, Saudi Arabia, Singapore, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Thailand, Turkey, U.A.E., and U.S.A.

NEWS SUMMARY

GENERAL

MP killed as Punjab violence worsens
Sikh terrorists stepped up their attack on the Indian Government yesterday, killing a prominent MP...

Coup in Guinea
Guinea's armed forces seized power in a bloodless coup a week after President Ahmed Sekou Touré died...

Durban blast kills 3
Three people died and a dozen were hurt when a car bomb exploded in the rush hour in Durban, South Africa.

Soviet exercise
The Soviet northern fleet began its biggest naval exercise in the Norwegian Sea and the North Sea...

Spanish negotiations
Spain's ruling Socialist Party began talks with trade unions, employers and political parties to reduce friction over plans to reorganise industry.

Cruise in Italy
The first cruise nuclear missiles installed in Italy have become operational in Comiso, Sicily...

Israel tightens grip
Israel tightened control over the Ayalon River crossing point into Lebanon to avert a repetition of Monday's Jerusalem terrorist attack...

UK-Unita talks
The British government is negotiating directly with the Unita guerrillas who kidnapped 16 Britons in Angola.

Strike hits Belgium
A million Belgians joined a one-day general strike in protest at government austerity measures, paralysing public transport in most cities.

Travel ban attacked
The leading East German magazine Sinn und Form criticised the authorities for refusing to allow travel to the West and for curbing criticism.

Indian in space
Rakesh Sharma became India's first cosmonaut, taking off with two Soviet colleagues from Baikonur, Kazakhstan...

Publisher's notice
The editorial content of today's international edition, including U.S. share prices, has been restricted because of industrial action at the Financial Times' printers in Frankfurt.

BUSINESS

Shell bid raised
ROYAL DUTCH/SHELL raised its tender offer for the outstanding 30 per cent of Shell Oil, its U.S. affiliate...

Wall Street
DOW JONES was down 7.01 at 1,146.15 at 3.30pm. Report, Page 29; Full share listings, Pages 30-32.

TOKYO: Nikkei Dow index closed 118.37 lower at 10,933.82. Stock Exchange index was 9.92 off at 8777. Report, Page 29; Leading prices, other exchanges, Page 32.

LONDON: FT Industrial Ordinary index fell 11.8 to 859.2. Report, Page 33; FT Share Information Service, Pages 34-35.

DOLLAR gained in London to DM 2.61 (DM 2.602), SWEF 2.161 (SWEF 2.158), Y20A (Y20A 1.8) and FF 8.028 (FF 8.006). Its trade weighting rose to 126.9 from 126.1. Page 30.

STERLING was quiet in London, losing 45 points to \$1.431, easing to \$1.434 and holding at DM 3.3775, SWEF 8.0 and FF 11.49. Its trade weighted index lost 0.1 at 79.7. Page 30.

GOLD closed at \$361.25 in London, Frankfurt and Paris, losing \$2.5, \$3.25 and \$0.25 respectively. Page 36.

BRITISH gold and foreign currency reserves fell \$1bn, or 8.5 per cent, in March as a result of the annual revaluation, the Treasury said. Page 11.

PHILIPPINES foreign debt at the end of 1983 was \$2,525.6bn, central bank governor Jose Fernandez said. Page 4.

WEST GERMAN unemployed fell by 143,900 to 2.39m in March, 4.6 per cent of the workforce, but the underlying trend was up for the first time since November. Page 3.

GREEK Government is to set up a commercial bank consortium to finance allied industries being rescued by the state, Economics Minister Gerassimos Arsenis said. Page 3.

SOVIET UNION admitted it had serious problems with western Siberia oil production, because wells were proving more difficult to tap.

CANADA proposed changes to anti-trust laws, ending mergers and takeovers and sanctioning co-operation among Canadian exporters. Page 8.

ALUSUISSE industrial group reported a SWFr 62m (\$10.6m) loss for 1983, down from SWFr 179m, and expects to be back in profit this year. Page 22.

CHRISTIES International, auctioneer, printer and graphics distributor, saw pre-tax profit more than treble to a record \$9.75m (\$13.9m) last year after a 40 per cent jump in auction sales. Page 25; Lex, Page 20.

MATSUSHITA Electric, world's biggest integrated electrical goods maker, is to launch \$1,000m (\$445m) of unsecured convertible bonds on the domestic market. Page 23.

PACIFIC TELESIS, one of the U.S. telecommunications groups formed by the AT&T breakup, is considering buying a big stake in Mercury, the privately-owned UK company set up to compete with British Telecom. Page 26.

CORROON & BLACK, sixth biggest U.S. insurance broker, is to fight a \$254m bid from Ingran Industries, a Nashville-based private conglomerate.

CARTER HAWLEY Stores, U.S. group which includes Neiman-Marcus and Bergdorf Goodman, is expected to reject a \$1.1bn takeover bid from The Limited, biggest U.S. women's fashion retailer.

UK railmen's move puts pressure on moderate miners

BY PHILIP BASSETT, LABOUR CORRESPONDENT, IN LONDON

PICKETING BY miners in the key area of Nottinghamshire is likely to be reimposed following yesterday's decision by miners' union area leaders to advise members to respect picket lines. The move could draw miners there into the strike for the first time.

Passengers were affected yesterday by the railway workers' strike for the first time. In addition, seamen's leaders voted to black immediately all movement of coal and coke around Britain's coasts. These developments occurred as the number of pits working normally rose to 43.

In spite of this slight easing the National Coal Board said that from this month it would have to cancel its annual summer reduction of about 10 per cent on the wholesale price of household coal. The scheme, popular with pensioners, cut the prices of house coal last summer by .07 a tonne.

Mr Arthur Scargill, president of the National Union of Mineworkers, said in an interview, published in Moscow in Trust, the Soviet trade union newspaper, that the strikes had unleashed a class war against Britain's rulers. It had gone beyond the issues of closures and pay and was now a fight for the basic principles and rights of all working-class people.

Mr Mick McGahey, NUM vice-president, said the NCB's use of brute force, fear and intimidation to try to secure pit closures was the beginning of a totalitarian state in our country. The Nottinghamshire area of village survives pit closure; Scargill on class struggle. Page 12.

link personal computers in its offices and to carry services including Intelpost facsimile transmissions. The Post Office expects the network, which will operate on private circuits leased from BT, to save it about £1m a year in telephone charges.

The only product which met its immediate needs. The Post Office project, which will start operating at the end of this month, will be one of the largest private networks in Western Europe. It is designed to carry internal administrative traffic and will not, initially at least, link Post Office counters.

Ballot offer by British unions

By Our Labour Correspondent in London

THE TUC yesterday offered the Government a ballot of union members on whether they prefer their existing decision-making procedures or arrangements proposed by the Government in its Trade Union Bill.

It reflects widespread and deeply-felt union disquiet, which extends even to moderate TUC leaders, that the Bill's provisions for holding ballots to choose union executives, decide on strikes and on the maintenance of political funds place "unreasonable and impracticable demands" on unions, as Mr Murray's letter puts it.

The TUC's voluntary step follows Monday night's backbench revolt over the voluntary agreement reached between Mr King and the TUC about the political levy, in which 49 Tory MPs voted against the Government.

The City Capital Markets Committee has told Mr Tebbit that the creation of a self-regulatory structure should be started immediately.

The City Capital Markets Committee, comprising bankers, lawyers, fund managers, Stock Exchange members and other interests, was responding to an invitation by Mr Tebbit to submit comments on the report prepared on investor protection for the Trade Department by Professor Jim Gower.

The Investment Protection Panel should have overall supervisory authority over the self-regulatory agencies and be answerable to the Council for the Securities Industry.

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Nigeria to meet trade creditors on rescheduling

BY QUENTIN PEEL, AFRICA EDITOR, IN LONDON

NIGERIA IS postponing the publication of its offer to reschedule an estimated \$3bn (£2.1bn) owing to leading supplier companies, in order to meet creditors objecting to the terms of the deal.

A meeting between senior Nigerian officials and leading members of a major group of creditors, who say they are owed about \$3bn in arrears, has been arranged for Friday. The move was welcomed yesterday by company officials as a major step towards reaching an agreed solution on the rescheduling of Nigeria's huge backlog of trade payments.

It follows the submission by the 350-strong creditors' group of a detailed memorandum on the proposed Nigerian deal, accepting important elements such as the six-year term, with 2½ years grace, but questioning the structure and pricing of the offer.

Bankers and company officials close to the discussions stressed yesterday that there was no guarantee that Nigeria would agree on any major changes to its proposals. However, members of the creditors' group welcomed the Nigerian decision not to publish its final offer before they had a chance to put their case.

The London-based creditors' group, including major British, U.S., Japanese, West German and other European concerns, last week submitted details of its objections to the Nigerian Government and to its advisers.

It wants individual promissory notes to be backed by a comprehensive agreement between the Nigerian Government and all the uninsured creditors to ensure the rescheduling is ranked on a par with all other medium-term debt and to prevent any discrimination in payment between individual suppliers.

It also questions the pricing terms of the offer, arguing that it should earn 1½ per cent above the London Inter-bank Offer Rate (Libor), the interest rate applied to the re-financing of nearly \$2bn in letters of credit arrears agreed with more than 60 international banks last year, rather than the one percentage point currently on offer.

IBM in major British telecom exchange deal

BY GUY DE JONGHEERES, IN LONDON

THE UK subsidiary of International Business Machines, of the U.S., the world's largest computer manufacturers, has been chosen to supply the core equipment for an extensive private network being built by the Post Office to handle its internal communications.

IBM won the multi-million pound order in competition against GEC, Plessey, British Telecom (BT) and Harris of the U.S. BT has, however, won a smaller order worth about £1m, to supply more than 80 small private branch exchanges (PBXs) for the project.

The contract is the biggest of its kind ever placed with IBM, which is expanding rapidly in telecommunications. It is for 27 1750-series electronic exchanges and a computer-controlled networking system which will route telephone and data communications between more than 130 regional Post Office centres.

The IBM 1750 exchange, which is made in France and was launched in 1979, uses traditional analogue technology, unlike the technically more advanced digital exchanges proposed by the rival bidders. But the Post Office said that it was the only product which met its immediate needs.

City of London backs reform

BY JOHN MOORE, CITY CORRESPONDENT, IN LONDON

A REGULATORY body should be created, to provide better protection for investors, an influential City of London committee urged yesterday in a paper presented to Mr Norman Tebbit, the secretary of state for Trade and Industry.

The City Capital Markets Committee, comprising bankers, lawyers, fund managers, Stock Exchange members and other interests, was responding to an invitation by Mr Tebbit to submit comments on the report prepared on investor protection for the Trade Department by Professor Jim Gower.

In January Professor Gower had recommended that the Department of Trade should have wide powers to supervise a number of new City self-regulatory agencies and would be responsible for day-to-day supervision of the investment community.

Three of the leading firms of City solicitors, Slaughter and May, Freshfields, and Linkers and Paines, were each involved separately or jointly in four of the issues.

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JOIN THE SWINDON ENTERPRISE

EUROPEAN NEWS

Madrid calls round table discussions on economy

By David White in Madrid

SPAIN'S RULING Socialist Party has started a series of talks with trade unions, other political parties and employers' representatives to try to reduce friction over the reorganisation of industry and other parts of the Government's economic programme.

The talks, which party agreement say are aimed at fostering "a spirit of collaboration," follow a sharp increase in labour conflicts in February and March. This has prompted government leaders to take stock of their failure to get across their message about Spain's economic situation and their policies for jobs and wages.

A series of strikes in transport and some of the country's main industries appears to have resolved the Government to avoid the kind of deterioration in relations that has taken place in France.

The talks, which opened yesterday with a meeting between party officials, led by Sr Alfonso Guerra, the Deputy Prime Minister, and the Socialist UGT union, will also involve the Communist Comisiones Obreras union, the Communist party, the right-wing opposition Alianza Popular and the CEOE employers' federation.

While no formal pact is proposed, the Government clearly hopes to prepare the ground for a revival of agreed nationwide pay frameworks, following the collapse of union-employer negotiations over 1984 increases.

Sr Felipe Gonzalez, the Prime Minister, last week criticised both the unions, for taking a short term view, and the employers for acting frequently from political rather than economic motives.

The continued membership of nationalised companies in the CEOE—for which they are an important source of funds—has been called into question following a decision by the state-owned shipyards to withdraw from the affiliated association, Construnaves. The cost of contributing to an organisation effectively controlled by smaller private companies is behind the move.

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Anti-nuclear attitudes threaten new Battle of Copenhagen

Hilary Barnes reports on the curious political roots of the anti-Nato stance in Denmark

MOUNTING CRITICISM of Nato by Denmark caused a senior diplomat from a Nato country to draw a parallel with the events which led to one of the greatest disasters for Danish diplomacy, the destruction of the Danish fleet by Admiral Nelson in the Battle of Copenhagen in 1801.

It was not so much what the Danes had actually done, but the British perception of Danish policy which caused the battle, the diplomat said. The British thought that the Danes were about to join an alliance with the Russian Czar directed against British maritime interests.

The diplomat thought that the Danes might again lose control of their destiny if their allies gain the impression that Danish security policy is based, not on loyal support for the alliance, but on what they read in Pravda, as he unkindly put it.

The Danish Government is also perturbed by events, especially since the idea was floated in some European capitals that the most appropriate forum for discussing the future of European defence policy may be the Western European Union. It is said that one of the WEU's advantages is that it would exclude two nations regarded as Nato trouble-makers—Denmark and Greece. (It would exclude Ireland and Norway.)

The problem for the four-party, non-socialist coalition government, whose firm and loyal commitment to Nato is not in doubt, is that it is not in control of the country's foreign policy.

This extraordinary situation has arisen because of the make-up of the nine-party Folketing (parliament). The small social-liberal Radical party, which holds the balance between Left and Right, usually supports the minority Government on domestic issues but leans to the Left on defence and foreign policy.

Questions of foreign policy are usually therefore decided by a group comprised of the Radicals, who are lukewarm supporters of Nato, the Social Democrats, with a firm pro-Nato history, and the Socialist People's Party, both of which are outright opponents of Nato membership.

The Social Democrats hold the key to the changes that have taken place in Danish policy, having moved away from the policies they themselves stood for until they went into opposition in September 1982.

The party's policy has changed on two main issues. From supporting Nato's 1979 twin-track missile modernisation programme, they have moved to virtually unconditional opposition to the deployment of cruise and Pershing nuclear missiles.

The party also now supports the Soviet-backed plan for a Nordic nuclear-free zone guaranteed by the super powers.

Denmark, along with Norway have agreed that it would not have nuclear weapons stationed on its territory "under present circumstances" as long ago as 1956, but this formula is compatible with Nato's doctrine of flexible response, which envisages the possible use of nuclear weapons against an attack from the East.

According to Mr Lasse Budtz, the party's foreign affairs spokesman in the Folketing, the party now plans to seek a majority to modify this formula to read that Denmark will not accept nuclear weapons under any circumstances.

This could raise serious problems for Denmark's future in Nato. Perhaps the least important consequence is that it would probably force Denmark to withdraw from the organisation's nuclear planning group.

Much more seriously, it could affect the integrated German-Danish defence co-operation within the Nato Command Baltic Approaches (Combaltpap), as the logic of the Social Democratic position would seem to be that if Denmark is not prepared to rely on Nato nuclear strategy, it could hardly rely on a force which is backed by this strategy.

There is also a question of how the U.S. and Britain, which are committed to reinforcing Denmark at a time of crisis, would react to the total de-nuclearisation of Danish defence strategy.

The Social Democrats do not see matters in the same light as those Nato critics who claim that Denmark has slipped into a semi-neutralist stance. They point out that the party is committed to Nato membership and will reaffirm its commitment at the party congress in September.

The Social Democrats seem to have public opinion firmly on their side. There is a two-to-one majority in favour of Denmark's membership of Nato, but a similar majority is also in favour of the establishment of a Nordic nuclear-free zone, according to opinion polls.

The revision of Social Democratic Party policy has so far caused only one member of the party's Folketing group, Mr Robert Pedersen, to declare his support for the policies the party followed until it went into opposition.

Mr Pedersen does not, however, seem to be making much headway against the strong current of opinion in the party in favour of the peace movement's objectives.

The party leader, former Prime Minister Anker Joergensen is a supporter, as is the deputy chairman of the Folketing group, Mr Ritt Bjerregaard, a former Cabinet Minister who recently became chairman of a peace movement fund-raising committee. Ms Bjerregaard then said that she would not mind if money went to the Communists as long as they were "rooting for peace."

Mr Budtz has said that the risk that he will be exploited as one of Lenin's "useful idiots" is one he will have to accept.

Despite the seeming drift of the Social Democrats towards a special and unorthodox relationship with Nato, which it may or may not be fair to describe as semi-neutralist, the die has not been finally cast.

On two occasions in recent weeks the party has refused to vote with its Left-wing allies, causing the Government parties to express the hope that the Social Democrats may be about to tone down their differences with the other pro-Nato parties.

The party is also taking a positive attitude to discussions with the Government on a proposed new five-year defence spending which, although it will probably result in a no-change budget in constant price terms and will thus fail to please Nato, will preserve the traditional bipartisan support for the defence budget.

This will provide at least a crumb of comfort for the Nato allies.

Mr Budtz has said that the

Members of Solidarity go on trial

By Our Warsaw Correspondent

TWO OF the banned Solidarity movement's best known figures, Ms Anna Walentynowicz and Mr Kazimierz Switon, go on trial today in Katowice in southern Poland on charges arising from an incident at the city's Wujek coal mine last December.

They face jail sentences of up to eight years for assault on police but the court can pass a suspended sentence. Indeed, its decision will provide an indication of government policy towards the growing number of political prisoners.

Since martial law was lifted last July only two people, according to official figures, have been sentenced for political offences. However, 354 people have been arrested on political charges since then and 369 are awaiting trial.

The Government is to assume, at least until July, the control of the price of the only remaining goods for which price decisions had been still in company hands. Price fixing on the great majority of goods is now back under central control.

Over the next two months this scene will be repeated in about 90 of Poland's higher education institutions. The voting will provide a major test of the Government's intentions towards the academic community, where the independent trade union Solidarity had substantial support.

The first shots were fired last week when the Education Ministry refused to finance a set of supplementary elections to the Warsaw University senate in which a number of former Solidarity activists, including Mr Janusz Onyszkiewicz, the union's national spokesman, were voted onto the governing body.

The underground Solidarity leadership has called for a boycott of next June's local Government elections, but there the regime of General Wojciech Jaruzelski is on firm ground.

Voting regulations give the authorities such a tight hold on who gets on to the new councils, that officials are beginning to worry that voters will not turn up at the polls.

But at the universities, the regulations are different. The Government is afraid that students and staff will now take too literally a law granting colleges greater autonomy which was passed in 1982 during the early months of martial law. The law was drafted in 1981 and the authorities decided to proceed with it as a sign that the crackdown on Solidarity had not halted reform.

During 1981, democratic elections of university rectors took place throughout the country, but after martial law was declared more than 25 rectors were dismissed. This made many think that the law was no more than an empty gesture, but as time passed it became clear that the autonomy granted was greater than had been thought.

A departmental head found, for instance, that under the law he could not be forced to hand over a student's file to the personnel department, probably for pursuit by the police. The nurses in universities after martial law were also smaller than expected and confined to institutions vulnerable to the whims of local apparatchiks.

One academic summed up the mood: "They could crack down at any minute, but they haven't done so yet."

Many in the academic community now recognise that they stand to lose a lot should the authorities lose their nerve and so back on the spirit of the law as a result of the elections.

Special legislation passed last summer when martial law was lifted gives the Government the right to dismiss elected university officers until the end of 1985, but at present it seems the authorities want to avoid this.

They are looking to the universities to re-elect the present set of rectors, but those left in place after 1981 and those imposed by the Government, so that a democratic law will have

Polish university elections test mettle of activists and regime

By Christopher Dobinski in Warsaw

"DON'T boycott these elections" exhorts a slogan on a notice-board at Warsaw's leading polytechnic. Other noticeboards are covered with election statements and a couple of students sit over a ballot box to register their colleagues as they vote for department councils, polytechnic senate, and for delegates who will elect a rector.

Members of Solidarity go on trial



Mr Janusz Onyszkiewicz (left) addresses a meeting with former Solidarity leader Lech Walesa; his electoral success in Warsaw has alarmed the regime.

university community. Where the Government appointees are unacceptable candidates treated by their colleagues but unlikely to arouse initial Government opposition should be put forward and elected.

Official policies against the intelligentsia are already hardening-up, the centrists argue should the universities take the radical line, the authorities would have an incentive to furch full tilt against the academic world.

Radical in the universities are arguing however that this is exactly why new rectors should be elected, regardless of what the Government thinks, as a show of independence.

The Centrist view, which could well prevail, is that the status quo should be preserved where present incumbents have shown goodwill in wanting to defend the interests of the

Power price warning for Austrians

By Patrick Shan in Vienna

AUSTRIANS will have to pay more for electricity unless the Zwentendorf nuclear power station is started up and the Hainburg hydroelectric plant is built, according to Herr Walter Fremuth, head of the national electricity company.

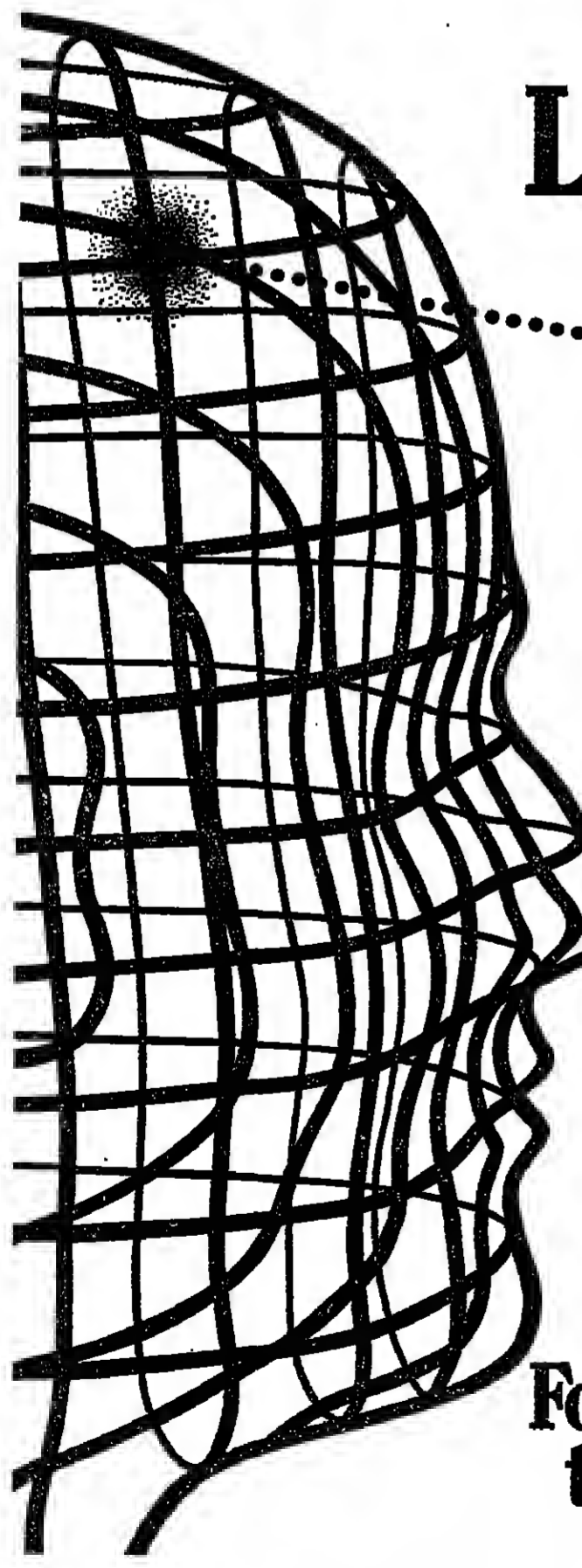
In a referendum in 1978, 52 per cent of voters opposed nuclear power and the Zwentendorf plant has stood finished but idle ever since at an annual cost of Sch 50m (£1.9m).

The planned hydroelectric station at Hainburg in eastern Austria has met strong environmentalist opposition.

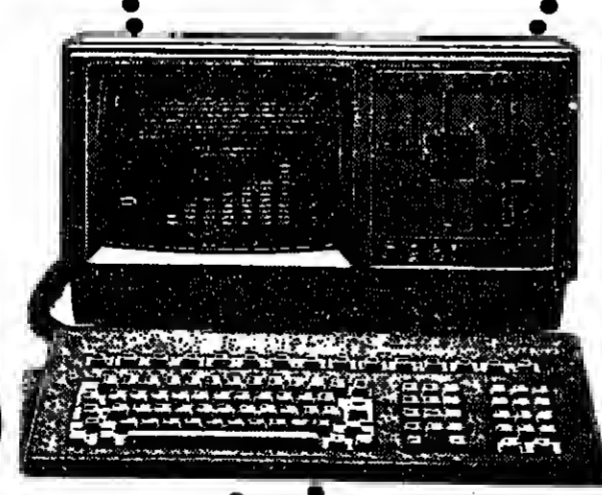
"If Hainburg and Zwentendorf become operative we can obviously hold back future increases," Herr Fremuth said. In the meantime, he is seeking an increase of 12 to 14 per cent in electricity prices from July 1 to pay for higher operating costs and to pay for investments in recent years.

Chancellor Fred Sinowatz has said that the Government will not allow electricity prices to rise this year, but Herr Fremuth's reference to Zwentendorf and Hainburg are at least as controversial as his demand for higher prices.

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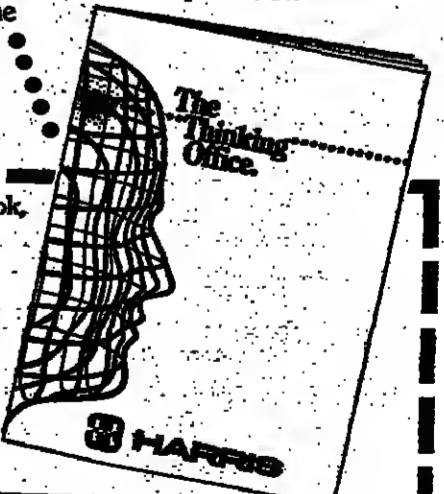


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EUROPEAN NEWS

SECOND OUTBREAK OF SERIOUS UNREST IN SIX MONTHS

Belgium disrupted by general strike

BY PAUL CHEESERIGHT AND IVO DAWINAY IN BRUSSELS

THE centre-right coalition Belgian Government yesterday faced its second serious outbreak of labour unrest in six months. The main Socialist union group called a general strike which led to up to 40 per cent of the country's unionists staying away from work.

The effects were mitigated by the failure of the group to make more than occasional common cause with the other main Belgian union grouping, which is linked to the Christian Democrats.

In Dutch-speaking Flanders, centre of Christian Democrat union support. The strikes were a protest against the austerity package introduced last month by Mr Wilfried Martens's government coalition of Christian Democrats and Liberals.

In Brussels, riot police were posted through the city centre but were not very active. The radio played tape music and postal deliveries were few and far between. Local transport was erratic.

Greek bank group to help ailing industries

By Andriana Teredia-Venou in Athens

THE GREEK Government is to set up a commercial bank consortium to finance ailing industries currently under state rescue.

The announcement coincided with a rash of strikes and work stoppages, the worst since the Socialists came to power in 1981, in Athens and Salonika.

French plant equipment industry seeks support from Government

BY DAVID MARSH IN PARIS

FRANCE'S plant equipment industry, which suffered an 11.5 per cent plunge in the volume of activity last year, has warned the Government that urgent support measures are necessary to prevent the domestic market being swamped by imports when an eventual construction upturn takes place.

Mr Pierre Bataille, former chairman of the Poclair excavator company and president of the plant equipment makers' federation, said yesterday that large parts of the industry could disappear because of years of government neglect.

The measures centre on a reduction to 12.5 per cent from 13.75 per cent in interest rates on loans to home-buyers granted by banks and special credits institutes. But M Bataille made clear yesterday that the Government should go much further.

While a construction upturn was taking place abroad, he complained, France was descending further down "the vicious circle of deficits, inflation, underinvestment, unemployment and bureaucracy."

'Star Wars' protection for Europe

By David Barchard in Comp, Turkey

THE U.S. Defence Secretary, Mr Caspar Weinberger, yesterday assured Nato allies that any American "Star Wars" missile defence system would protect Western Europe as well as the United States.

A senior U.S. official, briefing reporters after yesterday's meeting here of Nato's Nuclear Planning Group, said that Mr Weinberger had given a "firm, unequivocally positive answer" when asked whether the planned missile defence system would also protect Europe.

W. Germany on road to steady economic growth, says minister

BY RUPERT CORNWELL IN BONN

THE WORLD economy is now well placed to achieve a sustained spell of growth, Count Otto Lambsdorff, West German Economics Minister, said yesterday.

In an optimistic speech opening the Hannover fair, showcase and bellwether of West German industry, Count Lambsdorff declared that the domestic economy—Western Europe's largest—was embarked on a solid recovery, all the healthier because it had not been artificially promoted by the Government.

This year's fair, at which 6,800 companies from 50 nations are exhibiting, takes place amid fresh statistical evidence that the Bonn Government's hopes of 3 per cent growth in 1984 are well founded.

as a proportion of the world force to 8.6 per cent from 10.2 per cent in February. Earlier this week, Count Lambsdorff's ministry reported that output of manufacturing industry grew another 1 per cent in the first two months of 1984, to stand 0.5 per cent above the trough of the recession registered at the end of 1982.

At the same time, the most recent surveys suggest that fixed investment by West German companies is set to rise steadily in the months to come. Count Lambsdorff told his audience of businessmen and politicians that although the recovery had drawn its early strength from domestic and consumer demand, exports were now increasingly making the running.

However, both he and Herr Otto Esser, president of the

West German Employers Federation, spoke out again vehemently against the current campaign by large unions here for a 35 hour week with no corresponding cut in pay.

Herr Esser forecast that the economy would expand by 2.5 per cent "or perhaps a bit more" this year. But, he maintained, the dangers of conceding the claim for a shorter week on full pay could not be over-emphasised.

Management rejected the demand not on dogmatic grounds, but for reasons of economic and social common sense. The chances of avoiding a full-scale strike—at least in the most militant sector, the engineering industry—would now seem to hinge on the outcome of top level talks between management and the IG-Metall union, scheduled for Friday.

E. German call for greater freedoms grows louder

BY LESLIE COLITT IN EAST BERLIN

A LEADING East German Communist magazine has joined the country's Protestant church in criticising the authorities for refusing to allow travel to the West and for curbing criticism.

These are seen as factors causing a growing number of East Germans to apply to emigrate to the West. Since January more than 10,000 East Germans have left the country.

He noted that, at his age and with a secure life in East Germany, he was "not going to think about... East German readers filled in the missing word—"fleeting."

His wife, Inge, head of an agricultural co-operative related how their eldest son, who had served in the elite border guards, fled to West Germany after being punished for listening to the radio while on frontier duty.

"They suddenly brought us a wound which never heals," he said. "It was as if he had been killed during the war and they were bringing the urn. Not being able to see each other again is a wound which never heals."

The respected literary magazine, Sinn und Form, has published an extraordinary interview with two loyal Communist party members who question fundamental aspects of their country's orthodox Communist rule.

The current issue is sold out in East Germany and is being passed from hand to hand. A 59-year-old company manager, Hans, complained in the interview at being prevented from travelling to the West. "Is the lack of trust greater than the trust? he wondered. This question is posed privately by many East German Communists about the distrustful attitudes of their party and government.

Hungary ends spare parts tariff surcharge

By David Buchan

HUNGARY has announced an end to a 20 per cent tariff surcharge on components and spare parts imported from the West for hard currency, in a trade-liberalising move required as a condition of the country's current adjustment programme with the International Monetary Fund.

Earlier this year Hungary lifted some import quotas introduced, along with the tariff surcharge, in autumn 1982. The liberalisation follows recent improvement in Hungary's hard currency trade, which Budapest officials hope will be \$700m-\$800m (\$500m-\$571m) in surplus this year compared with \$550m last year.

While liberalising imports from the West, Hungary has, however, put in temporary abeyance a major initiative to increase exports to the West. Following the change of leader in Moscow, Hungary informed the EEC Commission that it wanted a "pause for reflection" before proceeding with formal negotiations for a trade accord with Brussels.

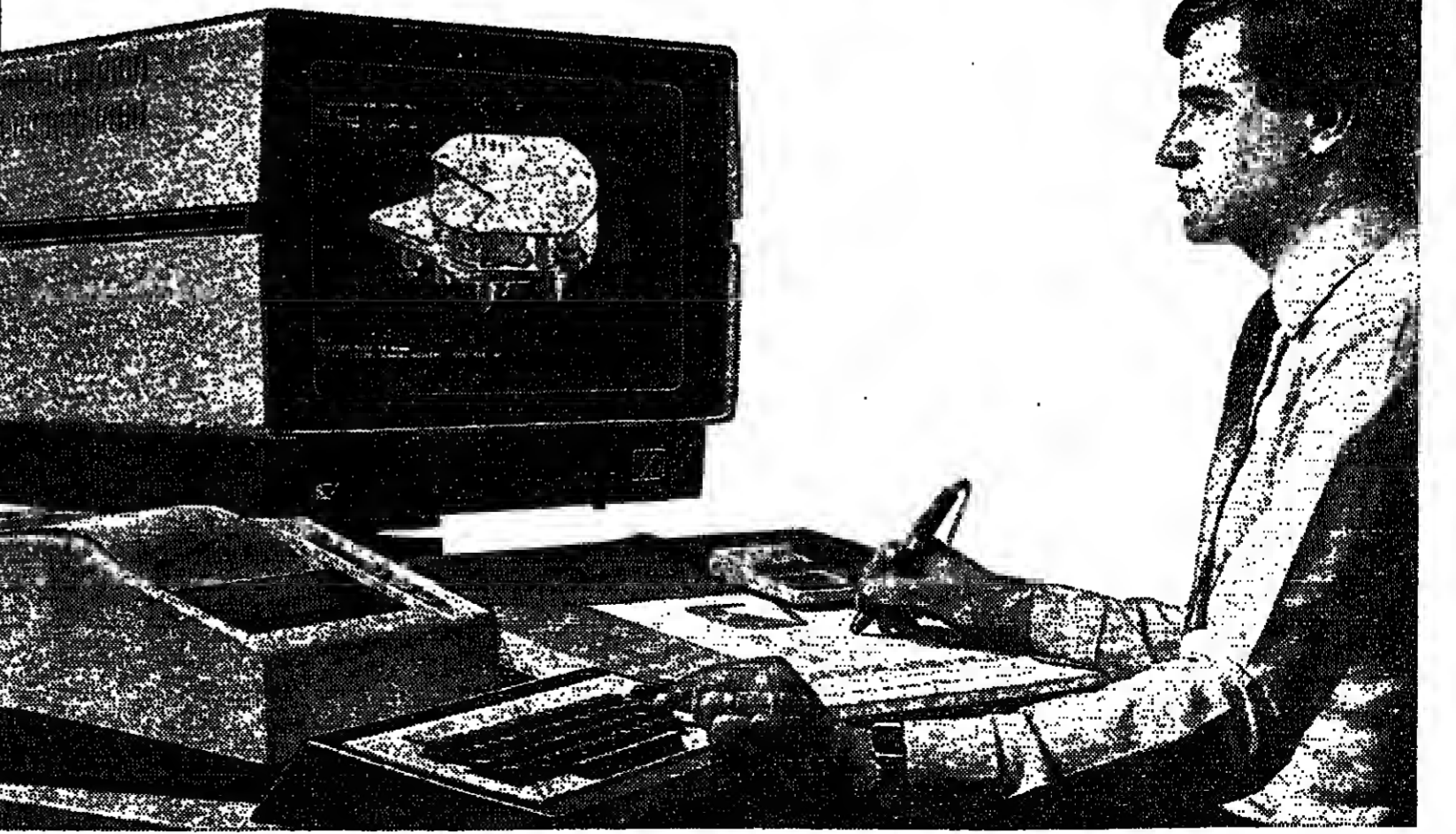
Since it was Budapest which initiated the discussions with Brussels two years ago, it would seem that Hungary is having political "second thoughts" about how an EEC-Hungarian trade pact might be seen by the new Soviet leadership.

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# THE MANAGEMENT PAGE

**U.S. machine tools**

**'We managed the company down'**

**Terry Dodsworth reports on how Cross and Trecker generated cash in a recession**

MOST U.S. machine tool manufacturers probably want to forget that 1983 ever happened. Not so Cross and Trecker. After the most destructive recessionary storm to shake the industry in the last 30 years, Richard Lindgren, chief executive of the Michigan-based group, reckons he has picked up the bargain of a lifetime.

"We wanted to make an opportunistic acquisition," he says. "We looked for one throughout this period. We had the cash, and eventually Bendix Automation came on to the market."

By opportunism, Lindgren means taking advantage of the tribulations of a weaker company. Only a year or so earlier Bendix Automation would have looked an unlikely target on those grounds. It was intrinsically larger than Cross and Trecker, with sales of \$500m against \$400m in the industry's peak year of 1981, and it had been largely put together only four years previously through a heftily-priced \$270m acquisition of Warner and Swasey, the U.S.'s premier lathe manufacturer—a price which would probably have been out of Cross's range.

But Bendix Automation had fallen on hard times. It had been battered by the 50 per cent fall in U.S. machine tool shipments last year, its sales had dropped through the floor and it had plunged into losses of \$63m. By the end of last year, Allied Corporation, which had picked up the machine tool group as part of its acquisition of Bendix, was ready to get rid of it—and at a rock bottom price. Cross and Trecker walked in to pick up assets still valued at \$155m for just \$65m in cash. (The effective cost could rise if Cross and Trecker's share price reaches a level at which Allied can exercise warrants issued under the deal.)

"If someone comes along and offers you a car at half price, you take it," says Lindgren, but he adds cautiously that Bendix Automation may not break back into profits for around 18 months. Despite this caveat, and the fact that book values in such a bombed-out sector may not indicate very much, he clearly believes that the company has pulled off a coup in the grand style.

If developments go according to plan, C & T expects the combined turnover of the two companies to reach well over \$1bn by the high point of the current growth phase in the U.S. economy. By comparison, Cincinnati Milacron, which was the U.S.'s undisputed leader in the sector, had sales of \$934m in 1981.

Moreover, the acquisition will

have crowned the development of a group which only six years ago was virtually a one-product company, heavily dependent on the motor industry. Through a couple of aggressive expansionary moves, first in a merger with Kearney and Trecker in 1979, and now with the takeover of Bendix Automation, C & T has placed itself in a position to play a leading role in the revolution in manufacturing technology which it expects to sweep through the Western world during the rest of this century.

The company has managed to achieve this with an almost uncanny display of how to play the business cycle. More than most industries, machine tools suffer from violent swings in demand as manufacturers in capital intensive industries respond to the market by manipulating their capital expenditure.

In the late 1970s and early 1980s, these normal variations became even more accentuated by the huge spate of investment in the U.S. motor industry's programme to reduce car sizes. This sent a tidal wave of spending through Detroit and its satellites, swamping the tool-makers and propelling earnings to unprecedented heights. "It was one of those periods when everything came together," says Lindgren. "Apart from help from the auto companies, there was a tremendous amount of investment in the oil industry, and both the construction and agricultural equipment markets were flourishing."

C & T, having picked up Kearney and Trecker just before the full force of this expansion hit the industry, saw its sales more than quadruple from \$97m in 1978 to \$409m three years later while after tax profits rose from \$8.2m to \$41.2m in the

same period. But by the back end of 1981, it was becoming clear that the cycle was beginning to turn. Lindgren, who had just arrived at the company after a varied career in manufacturing industry, was, he says, the biggest bear in the boardroom—although even he underestimated the severity of the slump.

"The order intake at the end of 1982 suggested sales for the following year of only \$200m, half of what we had been running at," he says. Against some opposition, the order went out to cut wherever possible. Three factories were closed, including a virtually new plant that was put in mothballs, and the workforce was pruned and pruned again from almost 4,000 to 2,500.

**6 As cuts shook out funds from stocks and debtors, C & T's already formidable cash reserve mounted by leaps and bounds**

The methods, typically American in their severity, were aimed at keeping the company in the black, but they were not only designed for the profit and loss account. "The point about a recession is to watch the balance sheet as well," says Lindgren. "We managed the company down." As the cuts shook out funds from stocks and debtors, C & T's already formidable reserve of cash mounted by leaps and bounds. From \$47m in 1981, it rose to \$68m in 1982 and \$92m last year. With very little debt in its balance sheet, the interest received on these funds—\$8.3m—was just sufficient last year to keep the company out of the red, despite the precipitous collapse in sales to only \$150m.

But by the back end of 1981, it was becoming clear that the cycle was beginning to turn. Lindgren, who had just arrived at the company after a varied career in manufacturing industry, was, he says, the biggest bear in the boardroom—although even he underestimated the severity of the slump.

The challenge now is to make the opportunism work. Bendix Automation's losses last year indicate the operating dangers Cross and Trecker may have sailed into. Its own cash reserves have been substantially run down and a repetition of last year's performance at Bendix would more than wipe out the best annual profits C & T has ever made.

If Lindgren is worried by the prospects he scarcely shows it. There may be some reshuffling

of assets (indeed, the gap between the acquired net assets and C & T's agreed price leaves considerable margin for write-offs without hitting earnings), and he hints that there may be further trimming.

Even so, Bendix Automation has already achieved a great deal of this reorganisation on its own account. Fred Searby, ex-McKinsey consultant, who heads the company, and who is an enthusiastic supporter of the amalgamation, says that the group has cut its fixed costs by 40 per cent since the crisis set in. He takes strong exception to forecasts of a \$34m loss this year: "We have had a lot of new product development, and our shipments will probably be 50 per cent higher," he says. "We are coming back."

Both Lindgren and Searby emphasise the potential rather than the actual. The reason why C & T wanted the Bendix offshoot is that it adds extra dimension and breadth to the product range. This fits into the established C & T strategy of moving away from stand-alone machines to manufacturing systems which can apply to whole units or entire factories.

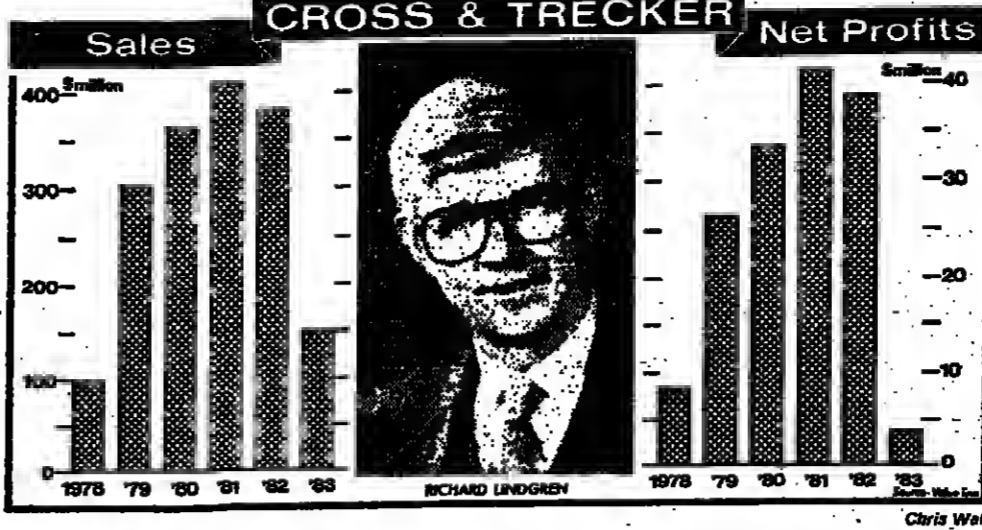
C & T has been expanding steadily in this direction for the last 10 years, shifting emphasis away from its base in the ultra-automated transfer lines which carried Henry Ford's principles of mass production to their logical conclusion.

"Back in the distant past, we sat down with a customer and gave him a milling machine which he then had to work," says Lindgren. "Then we added computerised numerical controls so that one man could run two or three machines, and we designed skills out of the machinist's role and put them in the computer."

"Our next step was to take the computers related to the machines, set up a host computer, and put all these together in a flexible manufacturing system."

"Today, rather than having a number of stand-alone machines, you have groups of stand-alone flexible manufacturing systems there in the factory. What we are in the process of doing now is to tie all those flexible systems together so that we can control the entire process together from start to finish. And that takes a lot of software skills."

In terms of products, there is also little overlap between Bendix Automation and the existing group. The old Kearney and Trecker division mainly makes tools for machining



**BUSINESS PROBLEMS**

**Sub-tenant and court order**

I have a shop which is not making much profit. Although I have been a sub-tenant for over two years and have always paid my rent promptly, I find that my immediate landlord has not passed it on to the superior landlord. He has therefore forfeited his tenancy over my premises by consenting to a Court order for possession by the superior landlord, on the grounds of non-payment of rent.

I was not told what was happening until this Court order for possession had already been arrived at, but now I am worried about my position. For instance does the forfeiture of the intermediate lease result also in the forfeiture of my sublease? I am told that I am not entitled to relief from forfeiture under Section 146 of the Law of Property Act 1925 because subsection 11 of it excludes cases where there is non-payment of rent. I am also told that I was not entitled to notice under Section 146 (1) of that Act again because of subsection 11. Was I really entitled to no notice before forfeiture took place? How can I protect my position as a sitting business tenant under the Landlord and Tenant Act 1954, which is what I have always understood myself to be? The superior landlord always knew that I was the subtenant but served no notice or proceedings of any kind on me before the court order.

The consequences of the forfeiture of the lease to the sub-tenant will lose his interest unless he applies to the court for relief. You can do this under Section 146 (4) of the Law of Property Act 1925 and should do so straight away.

**Change of name**

When a company changes its name pursuant to Section 18 of the Companies Act 1948, it is, I believe, necessary to file a copy of a new memorandum and articles of association incorporating the new name. This course is required under an EEC regulation. Is this correct and can you quote the EEC regulation?

Does it follow that a change of name is an alteration at law of the memorandum and articles of association of the company?

The change of name has to be registered and a copy of the resolution filed. The Registrar of Companies then issues a certificate of change of name. This is an alteration of the Memorandum of Association and has to comply with the requirements under Section 9 of the European Communities Act 1972 as to official notification (ie publication in the Gazette).

No legal responsibility can be accepted by the Financial Times for the answers given in these columns. All inquiries will be answered by post as soon as possible.

**Share valuation**

On April 21 1983 my father died, and part of his estate consisted of 388 shares in a private property company (total issued shares 1,318, nominal value £5 each). The total assets of that company, all in the form of tenanted terraced houses was estimated at £50,000 (professional open-market valuation, October 1982).

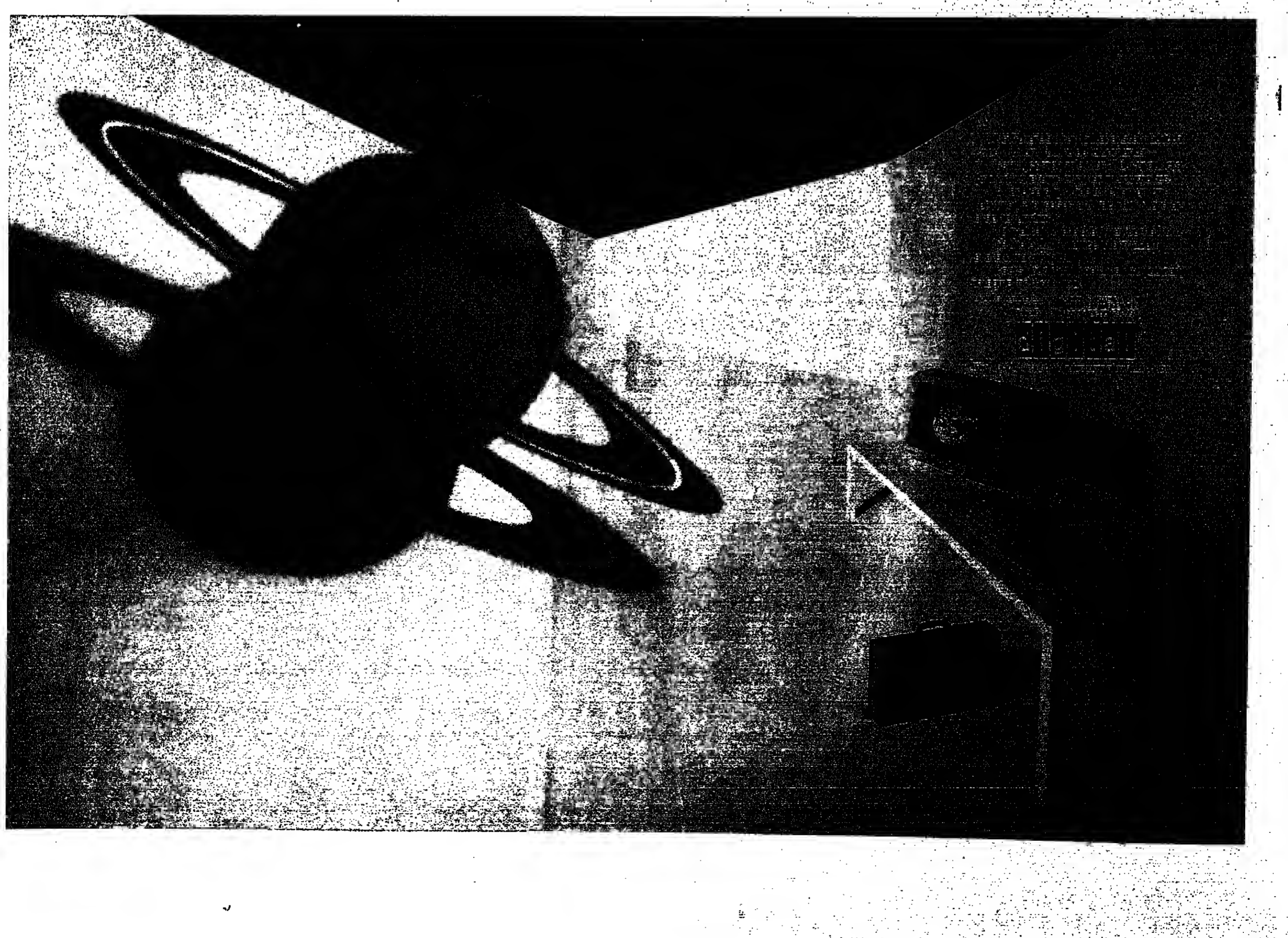
The shares valuation division of the Inland Revenue has simply divided the total shareholders funds of approximately £50,000 by the issued share capital, and come up with a valuation of £45 per share, discounted "for minority holding" to £27 per share.

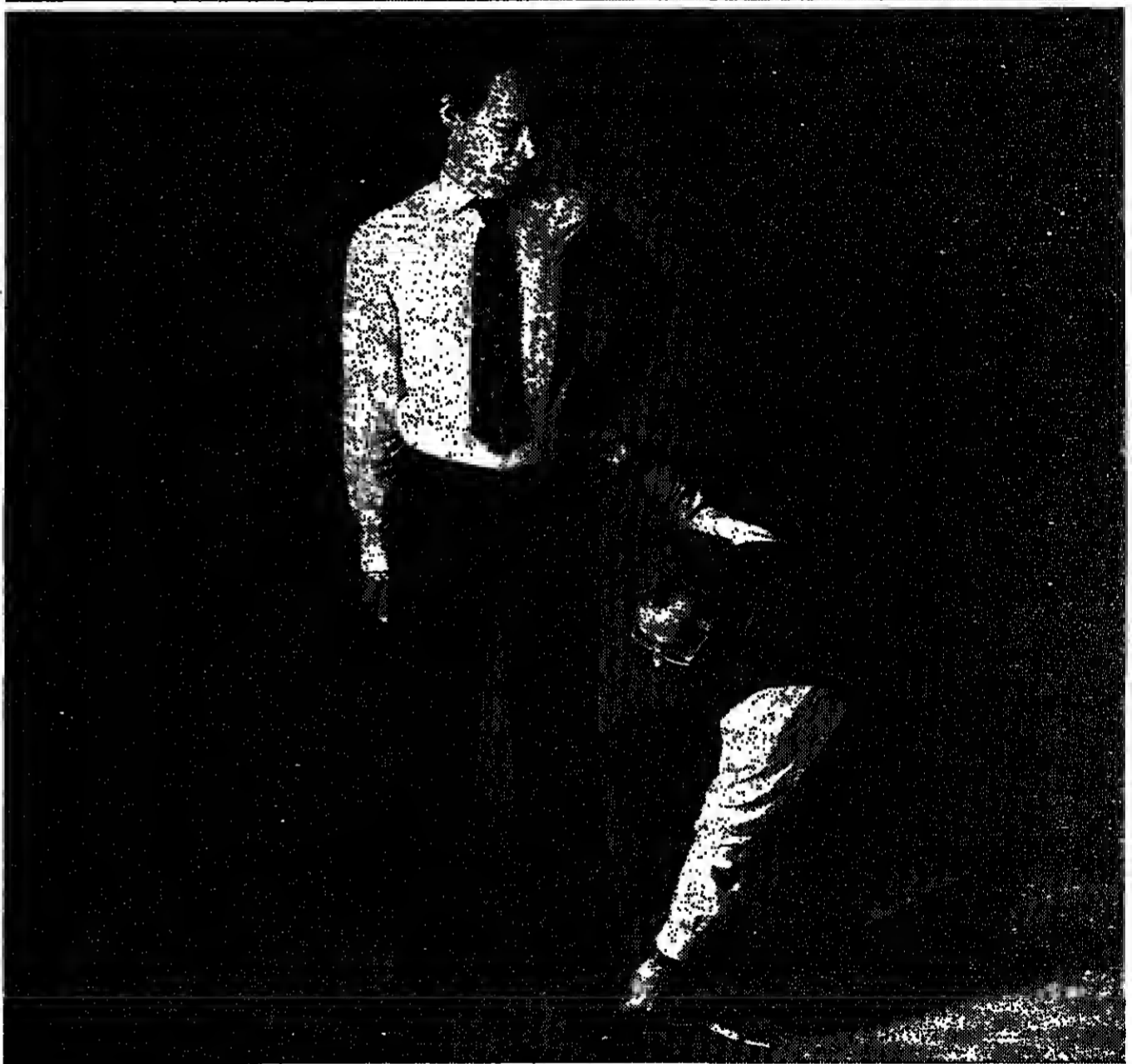
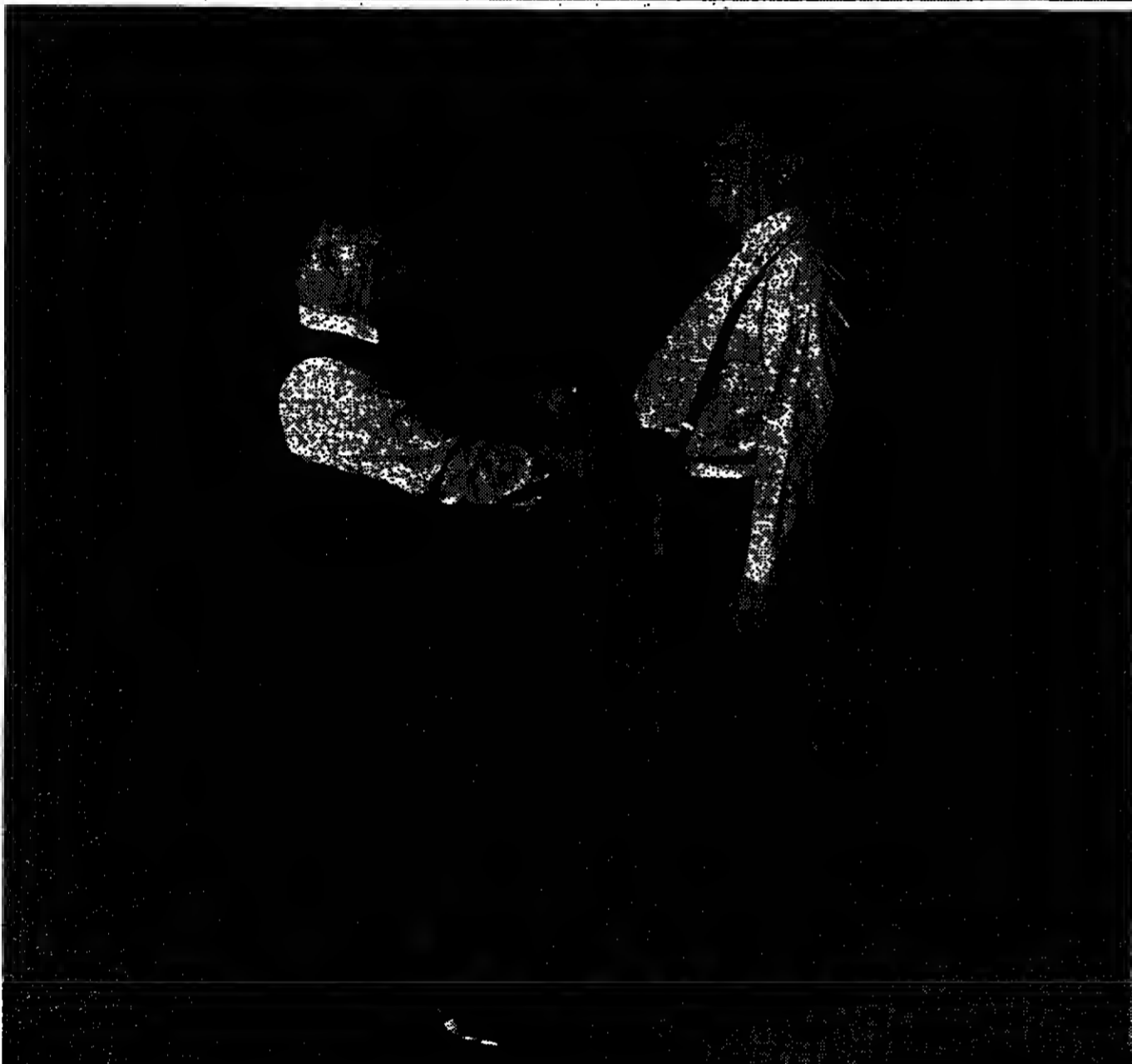
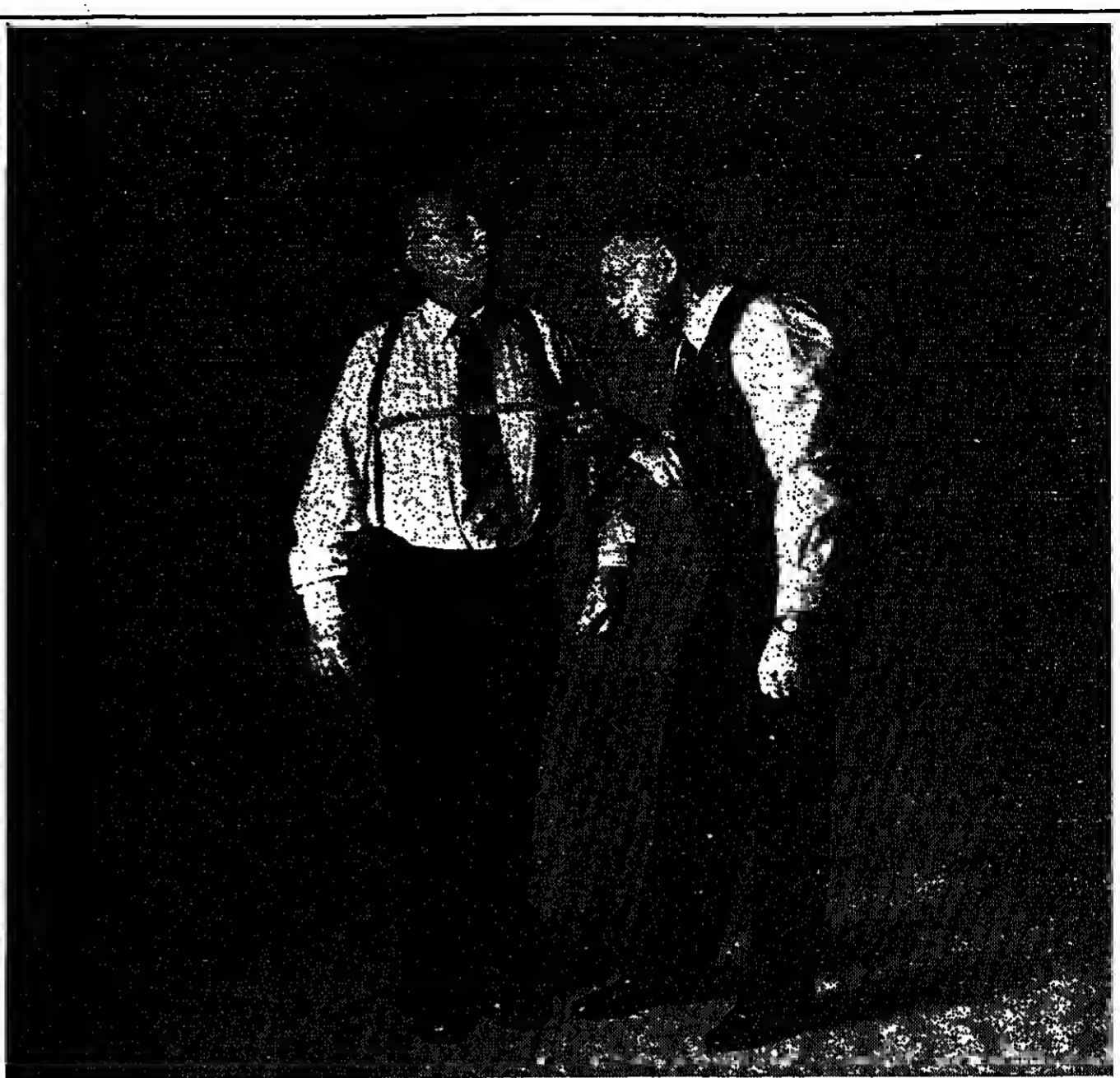
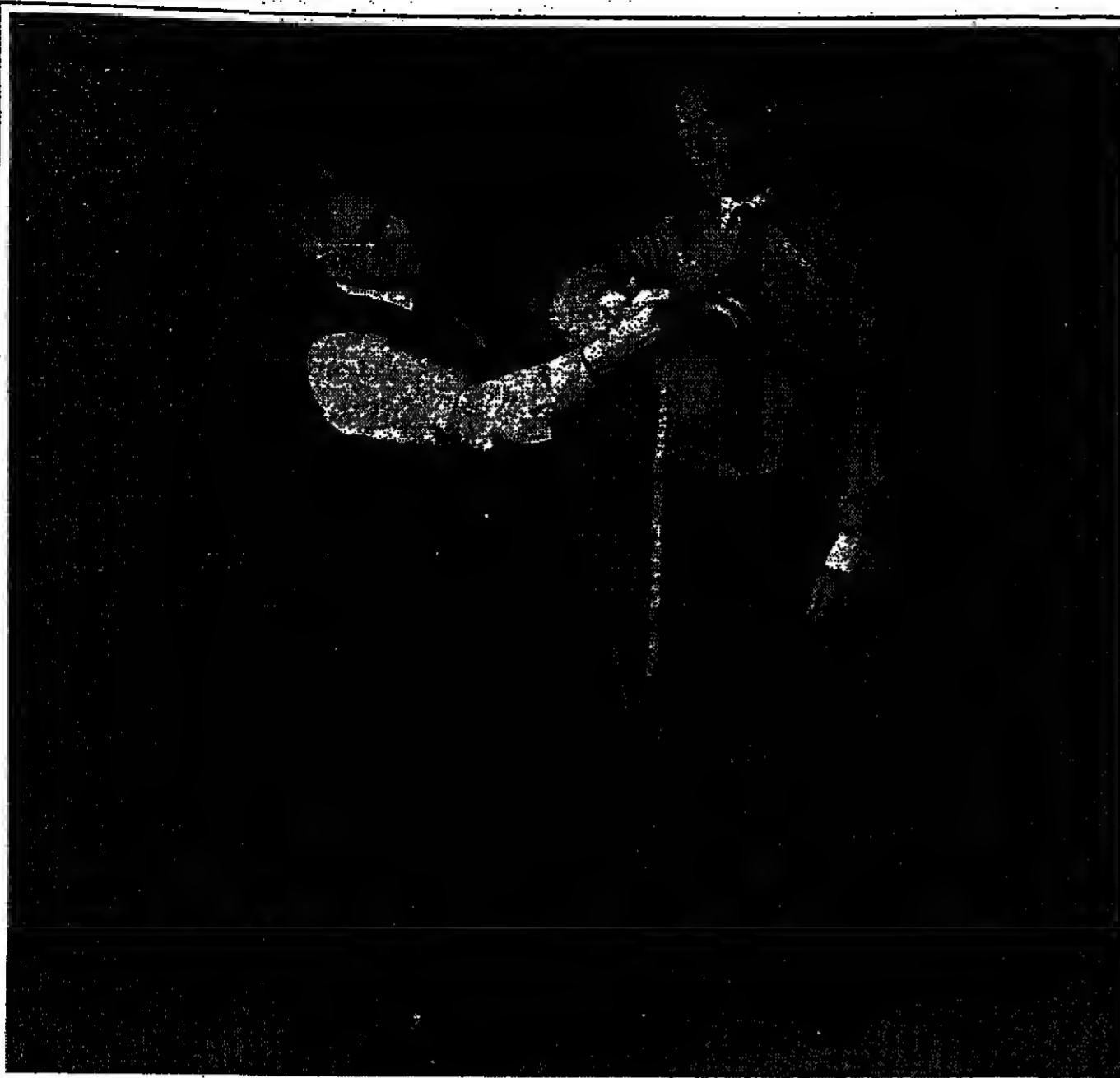
The problem is that the assets of the company are diminishing yearly because (a) the age and condition of the houses frequently results in compulsory purchase orders at misalease values; (b) yearly cost of repairs far outweighs rental income; (c) houses are sold when tenants leave, and proceeds used to stay in funds.

Because of the parlous state of the company, there are no full-time employees. One person is paid £1,500 pa for book-keeping and the only other person collects rents, at a charge of £8.50 per week.

Is there any way that the shares valuation division of the Inland Revenue could be persuaded to take the diminishing assets of the company into account when valuing the shares?

If you have not already done so, we recommend you to ask the company's auditors to negotiate with the SVD on your behalf. They know the full relevant facts, as well as the law. Share valuation is not really a do-it-yourself job.





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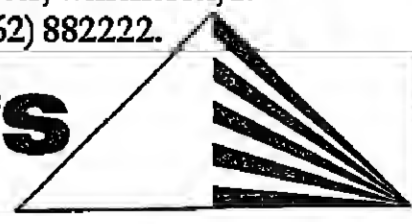
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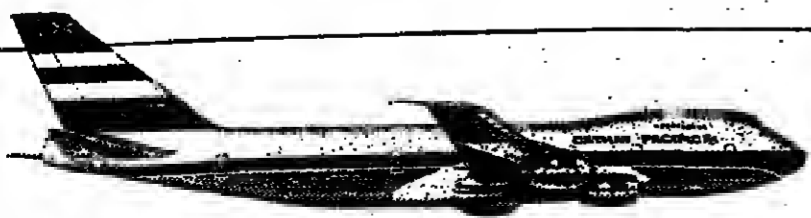
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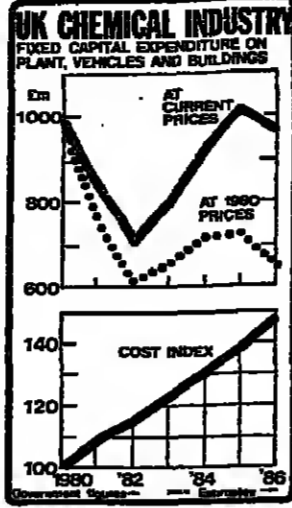
Chemical industry plans expansion

BY CARLA RAPOPORT

BRITAIN'S chemical industry intends to increase its capital expenditure by more than 25 per cent by 1985, a reflection of the industry's improved fortunes.

Dr Peter Caudle, a CIA executive, yesterday pointed out that the new spending is being concentrated on short-term, high-technology projects.

The CIA also stated yesterday that measures recently announced on changes in the regional grant structure, along with the phased reduction of capital allowances announced in the Budget, are likely to bring forward planned future expenditure, in the short term.



The new plant will be highly adaptable, able to switch to various products according to changes in the market place, CIA officials said.

'Arbitrary PAYE campaign' attacked

By Clive Welman

THE INLAND REVENUE is conducting "an arbitrary campaign" to subject the self-employed by PAY As You Earn, the National Federation of Self-Employed claims in a report published yesterday.

Compensation call for neighbours of nuclear stations

BY DAVID FISHLICK, SCIENCE EDITOR

PEOPLE LIVING near nuclear installations should be compensated in some way, Mr John Collier, a senior engineer with the Central Electricity Generating Board, told a conference on energy technology in London yesterday.

Mr Collier said that the public could be invited to participate in environmental and health monitoring programmes around nuclear installations.

Mine to be used for W. German N-waste

By David Fishlock, Science Editor

AN ABANDONED iron ore mine in Lower Saxony is to be used to store radioactive waste from West Germany's nuclear industry, British engineers were told last night.

The Federal German Government, which owns the mine through the state-owned company Salzgitter, has applied to local authorities for a licence to store low-activity wastes and radioactive parts from dismantled nuclear reactors.

A similar scheme to store radioactive wastes in an abandoned ICI andyrite mine at Billingham in North-east England has met strong opposition locally, although the mine is expected to store more than 500,000 cu metres of waste and to serve the German nuclear industry for about 25 years.

Dr Carsten Salander, a director of DWK, the German nuclear reprocessing company, told the British Nuclear Energy Society.

A widely spread population of many thousands lives above the sprawling mine, which until two years ago was producing iron ore for the German shipbuilding industry.

Dr Salander, a former German diplomat in London, said DWK planned to spend about DM 400m (about £100m) developing the mine as a nuclear waste repository.

DWK, owned by the German electricity companies, estimates that it must cater for the disposal of 2,200 tonnes of spent nuclear fuel and associated waste by the year 2000.

West Germany has 12 operating nuclear plants and nine more under construction, four of which are expected to come into service by 1984.

By the end of the century it expects to have 30,000 Mw of nuclear capacity operating. Nearly 4,000 tonnes of spent nuclear fuel will be reprocessed in France and Britain, DWK says.

DWK plans to reprocess a further 5,000 tonnes using a highly automated plant claimed by Dr Salander to be the advance of the Thorp project of British nuclear reprocessing plant at Sellafield in Cumbria.

Two German regions, Bavaria and Lower Saxony, are competing in host this reprocessing project, expected to cost about DM 7bn (£1.75bn) to construct.

Number of private housing starts falls

BY ANDREW TAYLOR

THE NUMBER of new homes started by private housebuilders has fallen during the first three months of this year, according to figures published yesterday by the Environment Department.

In the three months to the end of February private housing starts were 6 per cent lower than in the corresponding period a year ago.

Public sector housing starts in January and February fell by 21 per cent to 7,200, the 6,200 completions in the two months was only slightly higher than in January and February last year.

According to the Environment Department 16,000 private and public sector houses and flats were started in February in Great Britain compared with 18,200 in the same month last year.

Atomic energy authority board's 'faithful servant'

BY A SPECIAL CORRESPONDENT

THE UK Atomic Energy Authority had appeared at the Sizewell B inquiry to be a "faithful servant" of the Central Electricity Generating Board, a former research associate with the authority, claimed yesterday.

Dr Gordon Thompson, an Australian working in Cambridge, Massachusetts, was an associate staff member of the UKAEA's Culham laboratories in the early 1970s.

He told the inquiry that the UK nuclear industry and safety watch-dogs had in their evidence to the inquiry ignored important safety topics. These included risks of sabotage and the hazards involved in storing spent fuel rods on power-station sites.

Dr Thompson, a witness for the Town and County Planning Association, said the UKAEA and safety watchdogs had acted at the inquiry as a faithful servant of the CEBG. It shared the responsibilities of other official bodies over the deficiency of public information.

Dr Thompson said that in a Swiss study, underground siting of nuclear plants had been shown to be practical, both in engineering terms and in reducing safety risks.

At Sizewell, because of the nature of the soil and the high water-tables, underground siting could be achieved by building the plant in a pit and covering it with earth.

Lord Silson, for the CEBG, said the board considered it totally impracticable to build Sizewell B underground. A hard rock site with a low water-table was most suitable but additional safety problems would be introduced by building in this way and access would always be difficult.

Dr Thompson, a witness for the Town and County Planning Association, said the UKAEA and safety watchdogs had acted at the inquiry as a faithful servant of the CEBG. It shared the responsibilities of other official bodies over the deficiency of public information.

More lost tax recovered by Revenue

Financial Times Reporter

THE Inland Revenue is recovering more lost taxes every year, says the Treasury. Last year the department's 2,495 specialised investigators recovered £344m in extra tax, penalties and interest. This is the equivalent of £138,000 per investigator.

Consumer group to pursue battle with professions

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

THE Consumers Association yesterday promised to continue its campaign to promote greater competition within professional bodies.

Mr David Tench, its legal officer, said in London: "Our campaign will go on until freedom to advertise is firmly established and, together with all other unnecessary restrictive practices, the prohibition on advertising is a thing of the past."

He gave a warning against underestimating the capacity of the professions to resist reform by every possible means. "Nobody can justly accuse the Law Society of making a clean fight of its battle with the Consumers' Association over the House Buyers Bill last autumn," he said.

The professional groups were determined, strong and set in their ways. It was the Consumers' Association which had been chiefly responsible for stimulating the political action which, at long last, had unlocked the door to reform of the professions.

Experiment will link up retail chain computers

BY ELAINE WILLIAMS

A PILOT project to computerise business transactions in the British retail industry is to be set up by the Article Numbering Organisation, the trade body responsible for data bar codes on supermarket products.

The trials will link computers run by large retail chains so that orders, invoices and messages can be transmitted electronically rather than sent through the post.

Six retailers and suppliers will be involved in the initial tests which start in July. The association hopes to offer a full service to its 2,000 members by the end of the year. Members include groups like Unilever, Tesco, Waitrose, Boots and Sainsbury.

Baric, the computer services bureau jointly owned by International Computers and Barclays Bank, will provide the service, which will run on two small computers. It won the contract against competition from 14 other bidders.

Each retailer has an electronic mailbox which allows users to receive and send messages by storing them in a network of computer stores.

U.S. group wins Gatwick rail contract

By Michael Dorris, Aerospace Correspondent

AN £11m contract for a rapid transit system to the new passenger terminal at London's Gatwick Airport has been won by Westinghouse Construction International of the U.S.

The contract includes the provision of carriages, power rails, control systems and station doors for the unmanned rapid transit system. The system will connect the British Rail station at Gatwick and the main terminal with the new north terminal under construction.

It will be similar to the rapid transit system already linking the main terminal with the smaller satellite terminal opened last year.

The system will have two trains, each with three carriages, running on parallel elevated tracks. Each carriage will carry 60 passengers and baggage, and the system will be capable of transporting 3,900 passengers an hour each way.

The Westinghouse design has been used successfully for several years at Atlanta, Tampa, Miami, Seattle and Orlando (Florida) airports in the U.S. The system at Gatwick between the main and satellite terminals since last April has already carried more than 3m passengers.

Entertainer aims to take the fear out of finance

BY TIM DICKSON

MR TERRY WOGAN, interviewer of the famous and early morning radio entertainer, is hoping to attract an important new audience.

Continuing a show business tradition firmly established by the comedy actor John Cleese, Mr Wogan emerges yearly as the star of a new series of video training films aimed at "taking the fear out of finance."

The series is called Its Your Business to Know. Besides presenting and narrating the 17-part cartoon series, which covers a range of subjects from the elementary profit and loss and cashflow to the more specialised capital project evaluation and cross-border selling, Mr Wogan also has a

direct stake in the venture's success. He is one of the four founders and a significant shareholder in Film Training Aides, a production company set up to make the films. The marketing of the series will be handled by Mr Wogan's International Training Systems, part of the U.S.-based worldwide publishing empire.

"Show business changes as quickly it's madness to rely on it," Mr Wogan said yesterday. "The BBC could decide to discontinue my services at the end of the year but if you have a company it can continue even if you're running it from a hospital bed."

"When you have only got your voice and face between you and the workforce, you have to make other arrangements." Each of the 17 films consists of a fully animated colour film or video cassette supported by a trainer kit and trainee workbook. Mr Trevor Campbell Davis, managing director of McGraw-Hill International Training Systems, said the series had a large potential market—people running their own businesses, company managers, supervisory staff and even employees.

"We recognise an urgent need for companies to provide financial training for their employees," he added.

Terry Wogan: wooing a business audience

Advertisement for 'crédit foncier de france' featuring DM 200,000,000 7 3/4% Deutsche Mark Bonds of 1984/1992. Includes a list of 40 banks and financial institutions across Europe and the Americas.

UK NEWS

Plan for Coin Street site development dropped

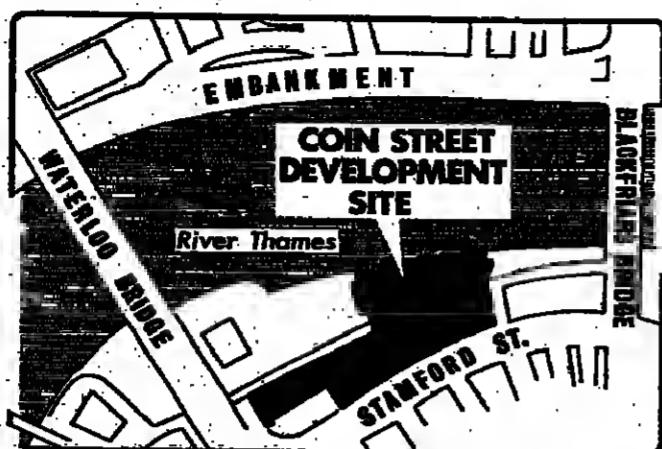
BY MICHAEL CASSELL, PROPERTY CORRESPONDENT

GREYCOAT Commercial Estates yesterday confirmed that it has abandoned plans for one of London's most ambitious development projects, between Blackfriars and Waterloo bridges on the south bank of the Thames.

Instead of developing a 1m sq ft mixed commercial and residential scheme on the 13-acre Coin Street site, the joint development company owned by Greycoat City Offices and Commercial Properties — has sold its land interests to the Greater London Council for £2.7m.

Greycoat Commercial controls about 10 acres of the riverside site, through a mix of leasehold and freehold interests. The price paid is thought to be nearly twice the market value, although it also reflects the GLC's release from a conditional commitment to sell its own site interests to the developers this year.

The council is pledging its full support for alternative proposals for the site, put forward by the Association of Waterloo Groups, representing local community interests. The outline plans, which involve 400 new homes, a park and some light industrial floorspace, were approved by the Department of the Environment in 1982, at the same time as the Greycoat Commercial proposals.



Last night, Greycoat Commercial said that, after five years of costly and complex planning, appeal procedures and litigation, prospects for the Coin Street development were still uncertain. It had "reluctantly concluded" that its interests would be best served by selling its land interests to the GLC. The council, which has opposed the Greycoat Commercial plans since the Labour Party won a majority in 1981, hailed the decision as a victory for the local community. Mr George Nicholson, chairman of the GLC planning committee, said "After a determined battle, the GLC deal with Greycoats is now finished. This clears the way for an immediate start on the mixed scheme proposed by the Association of Waterloo Groups."

Go-ahead for video conference network

By Guy de Jonquieres

BRITISH TELECOM and American Telephone and Telegraph have won U.S. government approval to start a video-conference service which will link business customers in London, New York and 13 other American cities.

The service, which will enable users to see as well as talk to each other, is due to start in the next few weeks. BT has not yet announced precise tariffs, but AT and T said it would cost about \$1,200 (£915) per half-hour in the U.S.

The transmission will be made between studios in city centres from 8 am to 8 pm New York time daily. But AT and T said that the service would not be available between 10 am and noon New York time, the peak time for transatlantic telephone calls, because of shortage of circuit capacity.

AT & T has been seeking official approval to start the service since September. Its initial proposal was rejected by the U.S. Federal Communications Commission. The commission's main objection was that AT & T planned to supply, as part of the service, digital compression equipment which greatly reduced the circuit capacity needed to transmit live video-conferences.

That would have breached the rules which prohibit AT & T from offering on its own network services which combine the transmission and compression of information. AT & T has now agreed not to supply the digital compression facilities itself.

Inland Revenue may crack down on schemes to avoid stamp duty

BY CLIVE WOLMAN

STAMP DUTY avoidance schemes which have saved companies engaged in corporate takeovers more than £30m in recent months face abolition by Inland Revenue moves to apply the principles of a recent court ruling.

The Inland Revenue has been advised by a leading tax barrister that a House of Lords decision in February, which ruled out many forms of artificial tax avoidance, can be applied against stamp duty schemes.

It emerged yesterday that this advice formed the basis of an Inland Revenue statement on Budget day that a scheme to avoid stamp duty on the conveyance of a house or other real estate was not effective. If the advice was applied consistently, the Inland Revenue could attack retrospectively the stamp duty avoidance schemes which have become increasingly popular in corporate takeovers.

BRIT Industries used one such scheme in a bid to save about £18m of stamp duty in its takeover of Eagle Star Holdings in February. Last summer BTR used a scheme to save itself about £14m in its takeover of Thomas Tilling.

One scheme, carried out last summer to avoid nearly £1m of stamp duty on the conveyance of a City of London office block, has in the past few weeks been attacked on the basis of the Lords ruling in the case of Furniss v Dawson.

An Inland Revenue official, however, said that the board of the Inland Revenue has not yet decided how the Furniss v Dawson case should be applied. Any official applying the case to stamp duty schemes was acting without central authority, she suggested.

"It would not be helpful to speculate on how the case might be applied. But it is not normal to apply such changes in the interpretation of the law retrospectively," she said.

The Inland Revenue may face judicial censure if it attacks only some forms of stamp duty avoidance schemes and not others.

Mr David Milne, a barrister and tax specialist, said, "You might say that the Revenue has a duty to attack all such schemes. It would be wrong for it to use its discretion to decide which ones to attack."

An Inland Revenue consultative document last year suggested that some corporate takeovers should be exempted from stamp duty—but not those where the bidder has bought out many shareholders with cash. As BAT Industries and BTR did.

The crisp with the sharper flavour

By Our Consumer Affairs Correspondent

Hedgehog flavoured crisps were officially launched yesterday in spite of protests from animal lovers, trading standards officers and those who thought it was all a late April Fools Day joke.

Benson's Crisps of Newport, Gwent, yesterday made the hedgehog - flavoured crisps available nationwide at a bargain price of 13p, carrying the slogan: "Please don't squash me."

A special promotion also promises to make a donation to the British Hedgehog Preservation Society on the receipt of 20 pack tokens.

The hedgehog-flavoured crisps were first introduced about 18 months ago by publicist Mr Phil Lewis and Mrs Di Lewis from Welshpool, Powys.

"We surprised our regulars one night by producing a bag of crisps with the word hedgehog stamped on it," says Di. The flavouring added to the crisps came from hedgehog rosettes and bog (pork) fat.

The flavouring proved an instant success—"well worth crossing the road for," according to one pub regular—but they attracted opposition from animal lovers who believed real hedgehogs were being used as well as trading standards officers who felt the word hedgehog broke the Trade Description Act.

Mr and Mrs Lewis responded by taking their idea to a commercial food flavouring company who developed a synthetic taste as close as possible to that of cooked hedgehog. They then approached Benson Crisps to produce the flavour in quantity.

Mr Graham Aaron, Benson's general sales manager, said yesterday: "At first I treated the whole thing with some scorn."

But eventually he saw the marketing possibilities and commercial production went ahead culminating in yesterday's launch of national distribution.

Mr Aaron denied that other flavours were in the pipeline. "We have no plans to make mole or curried rat flavoured crisps or anything like that," he said.

Scargill puts key question to trustees

By Raymond Hughes and Tony Jackson

THREE National Coal Board trustees asked the same "crucial question" by Mr Arthur Scargill in the High Court yesterday.

Could not the £3bn miners' pension fund continue to operate satisfactorily without implementation of the 1982 investment plan that has split the 10 trustees?

Mr Scargill said the 1980 investment strategy, allowing 15 per cent of the portfolio to be invested overseas and nearly 12 per cent in oil and gas, satisfied the requirement of prudent diversification.

Mr Hugh Jenkins, fund investment director, said it could continue under the 1980 plan but under constraints. There would be a serious lack of flexibility and investment opportunities would be lost.

Mr James Cowie, NCB deputy chairman and chairman of the trustees, agreed there could still be diversification but said he would not feel he was carrying out his duty as a trustee satisfactorily.

Mr Fred Harrison, NCB head of finances and chairman of the joint investment sub-committee for the miners' pension fund, said the 1980 plan did not meet his criteria for diversification.

The best professional advice was that to protect the fund's beneficiaries flexibility enabling more than 15 per cent overseas investment was needed.

The three were being cross-examined by Mr Scargill on the seventh day of the hearing in which the court is being asked to rule that trustees are in breach of duty to the fund in refusing to approve the 1982 plan.

Mr Cowan agreed he had favoured the fund selling its stake in Centre Video, on moral rather than commercial grounds, after the company became involved in video-nasties publicity, though Mr Jenkins had recommended retaining the holding.

Mr Jenkins said he decided to appoint Lazard Freres to advise the fund on a large U.S. property investment last December. A condition had been that Mr Ian McGregor, NCB chairman, a Lazard partner, would not benefit from the firm's involvement.

The hearing continues today.

Woolworth move to sell 34 stores angers shop union

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

THE WOOLWORTH stores chain is to sell another 34 of its high street shops in a bid to improve its trading operation. The union of shopworkers, caused the Division of Shop, Distributive and Allied Workers, the main shopworkers' union, to call for urgent "top level" talks.

Mr Terry Sullivan, a national officer of Udwad, said: "The union is most disturbed at the prospect of any further job losses, and we will continue to look after the interests of our members in these stores."

Staff and trade union representatives were first told of the planned sales three weeks ago. They affect stores throughout the country.

Since the Woolworth chain was bought by a financial consortium in late 1982, the company has steadily sold off unwanted stores, and the total has fallen from over 1,000 to 930 at present.

Last month Mr John Beckett, Woolworth's chairman, said it was "inevitable that further stores will be sold." Announcing the company's improved financial results for the past year, he said that Woolworth was now "making tough decisions."

Mr Beckett pointed out that "some stores will not meet our retailing criteria—the wrong size or location—and others will not foreseeably meet rigorous financial criteria we have set ourselves."

A union official claimed that the sales could cost about 1,000 jobs, although many of those made redundant could find employment with other retailers who acquire the Woolworth sites.

Revaluation puts reserves down by 5 1/2%

By Max Wilkinson

GOLD and foreign currency reserves fell by \$18m or 5 1/2 per cent in March, as a result of the annual revaluation, the Treasury announced yesterday.

The fall reflects a downward drift in the price of gold, in the 12 months since the end of March last year, as well as the rise in the value of the dollar, which reduced the worth of reserves in other currencies, measured in dollar terms.

At the old valuation, the reserves stood at \$17,730m at the end of March, just slightly down from the February figure. But after revaluation the value was put at \$16,730m (£12,960m). About \$5.5bn of Britain's reserves are held in the form of gold.

Some \$400m of the fall in the value of the reserves is attributed to a reduction of the gold price, which fell 6 per cent during the period. Of the remaining \$600m fall, a substantial proportion is said to be the result of a depreciation of other currencies against the dollar. The Special Drawing Rights (the International Monetary Fund's reserve currency), the European Currency Unit both form part of the UK's reserve assets.

BA cut-price tickets plan

By Michael Dome

Aerospace Correspondent BRITISH AIRWAYS is halving fares on many of its Super Shuttle routes between London (Heathrow) and Glasgow, Edinburgh and Manchester this summer, to encourage their use by holiday travellers.

The cut rates, available only on selected flights during the day and at weekends between April 16 and October 31, will be 55% return on the Glasgow and Edinburgh routes, and 64% return to Manchester.

CAPITAL MARKETS SUBMISSION Move for self-regulation structure

BY JOHN MOORE, CITY CORRESPONDENT

AN IMMEDIATE start should be made on the creation of a self-regulatory structure to protect investors, the City Capital Markets Committee urged yesterday.

The committee is one of the specialist groups formed at the initiative of the Bank of England to "act as a focal point within the City for views concerning current issues and its future developments."

The committee was responding yesterday to recommendations by Professor Jim Gower, the Department of Trade and the Department of Industry research adviser on a company law, contained in a report published in January.

Professor Gower's report contained wide-ranging proposals to overhaul the regulation of Britain's financial community, including sweeping new powers for the Trade Department. The Trade Department would super-

viser Gower became law, should be kept within manageable limits. The Council for the Securities Industry, the committee suggests, might adapt its role in the following ways. The council could narrow its terms of reference to the field of investor protection and take a clearly defined executive role, with supporting professional staff.

Alternatively the Council for the Securities Industry could be retained in its present form, but delegate its responsibilities in the field of investor protection to a new Panel analogous to the present Take-over Panel.

The committee says: "The investor protection Panel would need full-time professional executives of high calibre to deal with self-regulatory agencies on a day to day basis. It would be answerable to the Council for the Securities Industry, but it would relieve the full council from involvement in the details of formulating the self-regulatory system."

The membership of the Investor Protection Panel would be drawn from the securities industry with the inclusion of lay members drawn from outside. "The panel must have authority to ensure that discipline is imposed by a self-regulatory agency where necessary and also to call 'foul' retrospectively where someone has breached what it considers to be appropriate standards, whether or not he has broken the letter of a particular rule."

The City Capital Markets Committee also argues that the Trade Department should be involved in less detail of self-regulation than proposed by Professor Gower. "To this end direct registration (with the department) should be made less attractive and should not be required of the members of those professions which give only incidental advice on investments."

REPORT #1: How Standard & Poor's Analysts Measure International Credit Quality.

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Detailed analyses and the resulting ratings for a wide range of international issuers—corporations, sovereign governments, utilities, municipalities and supranational organizations—are made available regularly each quarter



Left to right: Hendrik Kraanburg, Philip Bawa, Edward Emmer, Roger Taitton, Jr., and Cecile Sauerda.

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UK NEWS

Abbey National reports 0.5% house prices fall

BY ANDREW TAYLOR

HOUSE PRICES fell 0.5 per cent on average in the first three months of this year compared with the final quarter of last year, according to Abbey National, Britain's second biggest building society.

Abbey's figures conflict with a survey by Nationwide, the country's third largest society, which last week reported that prices rose 3.5 per cent in the first quarter of this year.

However, the societies agree that house prices are likely to push ahead during the spring, traditionally the busiest sales period of the year.

Abbey National said yesterday it had been surprised at the findings of its first quarter survey, particularly after the Nationwide report.

The figures, which have been distorted by the fact that Abbey, unlike Nationwide, charges more interest on larger loans, Abbey suggested that Nationwide's figures might have been influenced by a sharper price rise for more expensive properties, particularly in the South-east.

Table with 5 columns: Region, Average price (£), % change in average price since 4th qtr. 1983, % change in average price since 1st qtr. 1983, Average income of borrowers (£)

HOUSE PRICES—FIRST QUARTER 1984

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Redemption Notice

City of Oslo (Norway)

NOTICE IS HEREBY GIVEN, pursuant to Fiscal Agency Agreement dated as of May 1, 1970 under which the above described Bonds were issued, that Citibank, N.A., Fiscal Agent, has selected by lot for redemption on May 1, 1984 through the operation of the Sinking Fund, \$1,875,000 principal amount of said Bonds at the Sinking Fund redemption price of 100% of the principal amount thereof, together with accrued interest to the date fixed for redemption.

The serial numbers of the Bonds selected by lot for redemption are as follows:

Table of bond serial numbers for redemption, including columns for bond number and principal amount.

On May 1, 1984 there will become due and payable upon each Bond selected for redemption the said redemption price, together with interest accrued to the date fixed for redemption.

Payment of the redemption price of the Bonds to be redeemed will be made in such coin or currency of the United States of America as at the time of payment is legal tender for the payment of public and private debts thereon, upon presentation and surrender of said Bonds with all coupons appertaining thereto maturing after the date fixed for redemption, at the Corporate Trust Office of Citibank, N.A., Municipal Bond Processing Window, 20 Exchange Place, 16th Floor, New York, N.Y. 10043 and subject to applicable laws and regulations, at the main offices of Citibank, N.A., in Amsterdam, Brussels, Frankfurt (Main), London, Milan and Paris.

Citibank, N.A. as Fiscal Agent

UK NEWS-LABOUR

Scargill says miners involved in class war

MR ARTHUR SCARGILL said in an interview published in Moscow yesterday Britain's present pit strike had unleashed a class war against the country's rulers.

The miners' leader told the Soviet trade union daily Trud (Labour) that the strike had gone beyond the basic issues of pit closures and pay and was now a fight for the basic principles and rights of all working-class people.

Workers see and know that businessmen, stockbrokers and Press barons easily spend more on a bottle of wine than pensioners gets to live off in a week, he said.

Mr Scargill, president of the National Union of Mineworkers, said all workers and unemployed should now support the miners' cause because it had become a battle to support their own interests against suppression and exploitation by the ruling class.

Village that survived pit closure

WHEN the pit closed in 1978 it was widely assumed that the North Derbyshire village of Langwith would become a ghost community within two years.

About 100 of the 800 miners took early retirement and half of the rest moved home to be closer to the nearby transfer pits at Markham, Workshop and Shirebrook.

Langwith was a clear candidate for the kind of "destruction" the National Union of Mineworkers sees as the inevitable result of closure. For 100 years it had produced coal and nothing else and in the process had given birth to one of the most tightly-knit villages in Derbyshire.

The population of 5,000 employed one of the finest bowling greens in the country, a top county cricket ground and tennis teams featuring in all the local leagues; the largest Co-op dairy in North Derbyshire—and countless other visible and invisible signs of community health.

David Goodhart on the struggle against decline at Langwith

There are a few of our kids on the YOP's at the Shirebrook estate but most of them are just hanging about in Legion clubs down there.

Despite the problems Mrs Goucher refuses to accept that the old family spirit of the village is irretrievably damaged.

There are now only five shops left in the village compared with twice that number before the closure.

centre of Derbyshire. These estates have... managed to absorb some of the labour from the closures of the 1960s—but the North-east of the county which has poorer quality land and communications has had to fend for itself.

The closure of Langwith was initially resisted by the NUM as in 1976 led to the first bitter national overtime ban against closures following a long strike at the pit.

The closure has obviously reduced the life of the village. There are still meetings in the pubs and clubs about having been sold down the river and after closure were sold at knock-down prices.

about the influx of "strangers" since some of the housing was put on the market.

Open cast mining continues but supplies are held up

OPEN CAST coal mining has continued uninterrupted during the miners' dispute but very little coal from open cast sites is reaching customers, writes Andrew Taylor.

An official for the NCB said that transport workers are refusing to deliver coal from all but a handful of open cast sites.

Open cast sites are mostly worked by transport union men. The National Coal Board's General Workery Union says it supports the miners' action.

More than 50 per cent of coal from open cast sites is used for generating electricity.

The NCB's Plan for Coal following the 1973 oil crisis established a target of 15m tonnes a year for opencast production.

AUEW rule complaint expected

LEFT-WINGERS in the Amalgamated Union of Engineering Workers are expected to complain that the union's rules have been breached by Sir John Boyd, its former general secretary.

Sir John has written to some shop stewards at an ICI plant in the union's No 2 region asking them to vote for Mr Gerry Russell, the sitting executive member for the region.

Mr Russell faces a challenge for his seat from Mr Len Brindle, Preston district secretary, a left-winger.

Process workers in chemicals industry offered 4.7% rise

CHEMICALS employers yesterday offered a pay rise of 4.7 per cent to process workers in the industry.

The offer comprises 10p on the hourly rate plus 3p consolidation, making an hourly rate of £24p and a basic wage of £52.12 for a 39-hour week. Settlement date is May 8.

Mr Kenneth Hack, industrial relations director of the Chemical Industries Association, said the offer represented what the industry could afford.

highest-level negotiating body, BR said it required agreement by April 16 for the railway's settlement date.

Mr John Palette, BR's director of employee relations, said he was prepared to hold as many meetings as necessary before the due date in order to reach agreement.

The union's claim focuses on low pay in the Postmen's grade, and argues that the basic rate of £96.45 for a six-day, 43-hour week is a "disgrace".

Staff cuts 'hit Customs services'

THE UNION representing executive grade staff in Customs and Excise yesterday claimed that because of job cuts and increasing workloads UK customs controls were "no longer effective".

The Society of Civil and Public Servants, which has submitted a claim for the creation of 500 extra posts in the department, said its members could no longer cope with the increasing amount of smuggled hard drugs and other contraband.

Tony Lewis, secretary of the customs and excise group of the SCPS, said: "The blunt truth is that the department has lost control of the situation and we are now dealing with a position where there is an open house for drugs."

Sealink protest meeting called

LEADERS of the National Union of Seamen decided yesterday to call 3,000 members on Sealink ferries to "stop-work" meetings which are likely to disrupt sailings.

Union3 party fund after complaint over aid

LABOUR's potential financial support from the trade unions has suffered another blow with a decision by the Transport and General Workers' Union to resoprtion with its own funds money spent on the party's London headquarters.

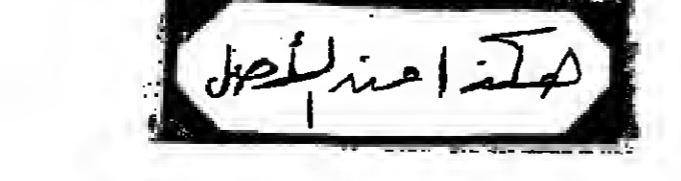
TUC dodges film artistes expulsion row

THE TUC's Independent Review Committee yesterday decided not to consider the long-running row over expulsions from the 1,800-strong Film Artistes Association—the union for crowd extras in films.

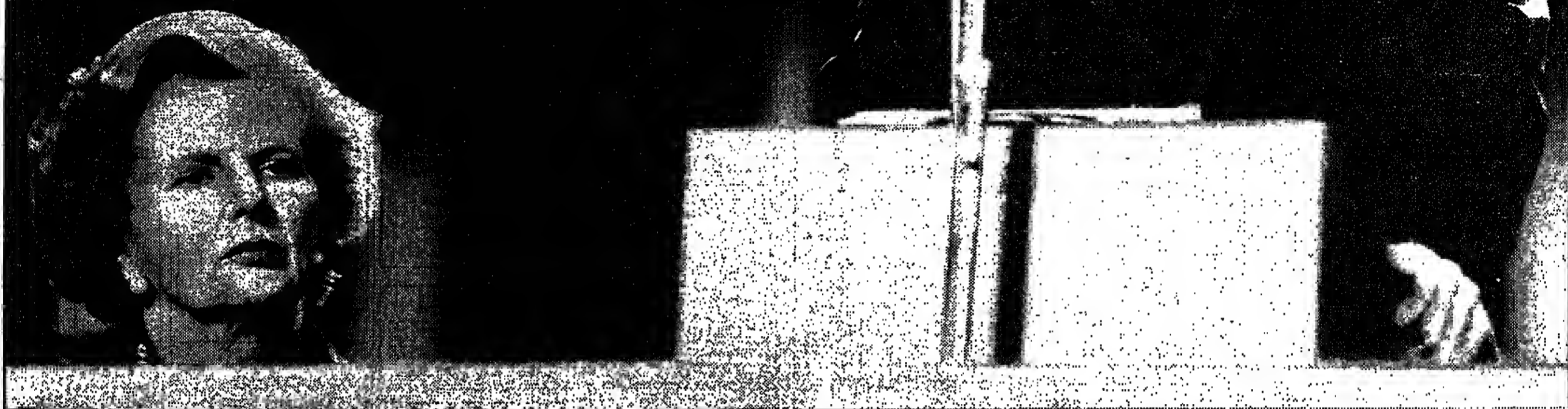
Mr Joe Gibson and Mr Ronnie Alden claim they have been suspended from membership for over 12 months for making allegations about the conduct of Mr Sean Brannigan, the general secretary, on BBC radio.

Mr Lewis said there were only two officers responsible for 150 miles of coastline in the Liverpool area, from Fleetwood to Holyhead.

Customs said yesterday that it had to determine policy principles within staffing cuts by the Government. There has been a shift away from "static control" to mobile task forces and to the gathering of intelligence



"I am a Tory, and I have been brought up as a Tory, and I believe that the burden of proof is upon the man who advocates change, and if he does not satisfy that burden of proof then change should not be made." PATRICK JENKIN, CONSERVATIVE PARTY CONFERENCE, 10 OCTOBER 1983.



# SHOULDN'T MINISTERS PRACTISE WHAT THEY PREACH?

As Environment Secretary Patrick Jenkin tries to force through his proposed abolition of the metropolitan county councils, he seems to have forgotten the statement that he made at last year's Conservative Party Conference.

The fact is that the Government hasn't even attempted to prove the case for dismantling the metropolitan county councils.

Its White Paper, "Streamlining the Cities" is the blueprint for abolition. The architect is Mr Jenkin, who has not produced a shred of evidence, nor a single fact to support his proposals.

Originally, his main argument was that the metropolitan county councils were "a wasteful and unnecessary tier of government" which should be abolished as quickly as possible.

Mr Jenkin claimed that the abolition plans were "the most carefully thought out part of the Government's manifesto," and he was confident enough to predict "savings of up to £120 million a year."

However, the Minister's subsequent statements would indicate that the Government's whole thinking on abolition has been grossly inadequate.

Initially he promised: "If we don't achieve substantial savings when this exercise is completed, I shall have failed." (October 1983).

Then in November of the same year he claimed: "I do consider that savings of upwards of £100 million annually could be made, but that is no more than a broad estimate." (November 1983).

Five days later he announced: "I am beginning to recognise my wisdom in not plucking figures out

of the air, because had I done so I might have underestimated the savings that could be achieved." (November 1983).

He also said: "Savings will depend entirely on final, detailed decisions" of the successor authorities. (November 1983).

(One does wonder how he arrived at this conclusion when it is he who would control the budgets of the new joint boards which would inherit most of the metropolitan county councils' current expenditure).

Completing his shift of ground, the Minister declared: "Expenditure issues are not central to the case for abolition." (December 1983).

## FLYING IN THE FACE OF FACT.

The truth, of course, is that abolition would cost, not save, the ratepayers' money.

Coopers and Lybrand Associates is a top independent management and financial consultancy (often used by the Government itself). They pronounced the case for change both "overstated and misleading." They also concluded that: "There are unlikely to be any net savings as a result of the Government's proposed changes, and there could be significant extra costs."

Surprisingly, Mr Jenkin claimed that their report supported his views, although Coopers and Lybrand made it clear that the transitional cost of re-organisation could be as high as £240 million. Which would mean ratepayers having to find up to £61 million more every year to pay for exactly the same services.

But it isn't just the financial arguments that are ringing in Mr Jenkin's ears. The Government has received responses from some 3,000 third parties, and criticism has come from groups of all political persuasions.

From commerce and industry, professional bodies, academic institutions and individuals.

Respondents have expressed major concern about the inevitable inefficiency of Mr Jenkin's proposed new local government structure, which they feel would quickly lead to a reduction in the levels and quality of services, as well as an increase in costs for providing them. Not to mention the elimination of direct accountability for these services.

Even those who have expressed some support for re-organisation, have warned that this further major upheaval should only be contemplated if there is a certainty of significant savings to the ratepayers.

In fact, it does appear that the majority say Mr Jenkin's proposals are wrong, either in whole or in part. Hardly surprising therefore, that the Minister has been reluctant to make public the views so widely expressed.

The metropolitan county councils do not claim that the present local government structure should be above change.

What they do claim however, is the right to a fair hearing, through a full and independent inquiry, to determine what changes might be beneficial.

How can Mr Jenkin disagree, when he believes that "the burden of proof is upon the man who advocates change."

THE METROPOLITAN COUNTY COUNCILS OF GREATER MANCHESTER, MERSEYSIDE, SOUTH YORKSHIRE, TYNE AND WEAR, WEST MIDLANDS AND WEST YORKSHIRE.

APPOINTMENTS

Promotions at Beecham Group

Mr J. F. K. Hunter, Dr K. R. L. Stansford, and Mr V. J. Steel, have been appointed directors of BEECHAM GROUP.

Mr Richard Lake will be joining the partnership of RAPHAEL, ZORN, stockbrokers, on April 10.

The DECLAN KELLY GROUP has appointed three non-executive directors to the main board.

Mr David Percy Nash, assistant treasurer of Imperial Chemical Industries, has been appointed to the board of TMOXIDE GROUP.

Mr Frank Stimpson has been appointed director of finance of EAST MIDLANDS ELECTRICITY.

Dr H. Marshall Smallley has been appointed managing director of MACFARLAN SMITH, Edinburgh, a Claxo company.

Mr David Owen has been appointed managing director of TAYLOR NELSON MEDICAL, a medical market research company.

Mr Finn Arnesen has been appointed a general manager of FK CHRISTIANIA BANK (UK).

Mr F. G. Bennie has been appointed a non-executive director of HIGGS AND HILL. He will also be a non-executive director of Higgs and Hill Property Holdings.

GAMBICA, the association for the instrument industry, control and automation industry in the UK, has appointed Mr V. (John) Trenchard, agency director, Babcock-Bristol, as chairman of the GAMBICA commercial group.

CEMENTATION INTERNATIONAL has appointed Mr Jarek Bielous to its main board as technical services director.

Mr Frank Nelson has joined WILTSHIER SOUTH EAST as finance director. He was with Cooper and Lybrand Associates.

Mr Brian Hamill, export/import trading manager, has been appointed to the board of CHEF FOODS as trading director.

Mr Stephen Mawditt has been appointed managing director SENIOR MANAGEMENT INTERNATIONAL.

Mr Eric B. Colwell has been appointed chairman of the VICTORIA WINE COMPANY, succeeding Mr Michael Jackson.

Products and Whiteways wines, spirits and soft drinks division of Allied-Lyons.

Tyne Tees Television managing director, Mr Andy Allan, will leave the company in six months to take up a new appointment within ITV.

Mr Garry Turvey has been appointed director-general of the FREIGHT TRANSPORT ASSOCIATION.

Mr Clive Braddy has joined BRADBURY WILKINSON as deputy chairman and group chief executive.

STANDARD CHARTERED BANK has promoted Mr V. R. Winton to senior general manager.

Mr Clifford K. H. Hunter has been appointed exploration manager of CAMBRIDGE PETROLEUM ROYALTIES.

Mr David Hugh Newton will be joining the partnership of L. MESSEL AND CO., stockbrokers, on April 7.

BROWN SHIPLEY INSURANCE SERVICES has appointed Mr R. W. Thrower as managing director of Holmwoods and Crawford (Marine and International) in succession to Mr D. C. McIntosh.

Mr John S. Morgan has joined the Blackheath-based Lench organisation as sales director of the group.

Mr Derek K. Bird has been appointed to the board of BABCOCK-BRISTOL—a member of the Babcock Industrial and Electrical Products group.

Mrs Linda Prophet has been appointed a director of the TAYLOR HARRISON GROUP, which includes Meter-Ads, Carpark-Ads, Call-Point Advertising and Postal Centres (International).

The INSTITUTE OF ACTUARIES has elected the following to its council. They will take office at the annual general meeting on June 23.

Mr Cliff Quarty has been appointed life and pensions manager of BARCLAYS INSURANCE SERVICES, a wholly owned subsidiary of Barclays Bank.

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COMPANY NOTICE

KLEINWORT BENSON (JAPAN) FUND

Notice of Meeting. Shareholders are invited to attend a General Meeting which will be held at the offices of Kredietbank S.A., Luxembourg.

- Agenda: 1. Receipt of the Reports of the Board of Directors and the Statutory Auditor. 2. Approval of the balance sheet and the profit and loss statement as at December 31st, 1983.

Approval of the above items of the Agenda will require no quorum and will be given by the affirmative vote of a majority of the shares present or represented at the Meeting.

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BASE LENDING RATES table with columns for bank names and interest rates. Includes A.R.N. Bank, Allied Irish Bank, Amro Bank, etc.

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# TECHNOLOGY

EDITED BY ALAN CANE

## SWEDEN RUNS MAJOR PROJECTS IN HEAT STORAGE

# Caves of heat for winter warmth

BY MARK NEWHAM

WORK IS about to start on one of the world's largest energy-saving projects — a 3m cubic metre heat store built in the high latitudes of Sweden. There water heated by solar energy systems during summer months and by industrial waste heat will be retained for use in winter.

Designed jointly by the Swedish Building Research Council and Sweden's State Power Board, the SKR 32m project will consist essentially of a natural underground aquifer into which summer-heated lake water will be injected and stored until the heat is required for heating buildings. It will then be recovered and raise the temperature needed through large-scale heat pumps before being fed into central heating networks of local buildings in Hedenora in central Sweden.

The project is Sweden's second aquifer heat store experiment—the first being a 3,000 cubic metre capacity aquifer at Klippan in southern Sweden — but represents the country's eighth large-scale heat store project. Its predecessors consist of stores constructed in excavated rock caverns, abandoned mines, excavated pits and in multiple well systems (series of wells sunk into rock and clay).

Sweden's rapid progress with large-scale energy-saving technologies is owed in the main to three factors. The country urgently needs to reduce its historic reliance on oil which accounts for about 70 per cent of the energy consumed; Sweden plans to phase out its nuclear energy supply by the year 2010; and about SKr 500m has been raised yearly since

1980 through a tax on oil use and pumped into new energy technologies and energy saving projects.

The availability of sufficient funds for energy conservation trials has provided the greatest spur to the programme and now Sweden boasts Europe's biggest operational heat stores.

The largest is a 200,000 cubic metre capacity store in an abandoned mine at Kopparsberg in central Sweden where water heated by industrial waste heat is stored at a temperature of about 33 deg C. Heat pumps in the SKR 24m project draw on this heat and raise temperatures sufficient for building heating. The project represents the first of many planned, the State Power Board calculating that Sweden has about 30 other abandoned mines available which are suitable for use as similar heat stores.

Central Sweden also pays heat to two other large scale heat store projects, both of which have been carved out of the solid crystalline rock of the area. At Lyckebo near Uppsala, 100,000 cubic metres of rock—enough to fill a third of the QE II or cover a football pitch to a height of 20 metres—has been excavated to form an underground rock cavern and at Avesta, a smaller, 15,000 cubic metre capacity cavern has been constructed. The larger of the two was built at a cost of SKr 40m and has 15 per cent of the hot water it contains heated by a 5,000 square metre area of solar collectors during summer months, the remainder being heated electrically.

Heat from the stores is recovered during winter months

using heat pumps although, in some cases, these are unnecessary since rock caverns, according to the Swedish State Power Board, can retain water at temperatures up to 100°C.

Further north, at Lulea, another 100,000 cubic metre capacity heat store experiment is being conducted, this time in the form of a series of individual wells sunk into rock to a depth of 150 metres and filled with water heated by waste industrial heat. The heat stored in this way is again extracted using heat pumps when local buildings require heat in winter.

A similar heat store trial is under way near Gothenburg on Sweden's west coast although, in this case, the heat store material is clay instead of solid rock. Researchers are looking closely at this trial to discover whether the heating of the clay produces any major geotechnical changes during heating, this type of heat store could prove one of the most cost-effective systems, second only to the aquifer concept.

Multiple well heat stores in clay and rock cost in the region of SKr 0.7-1.3 per kilowatt hour required, rising to SKr 1.1-2.1 in the case of excavated rock caverns. This produces energy costs in the range of 3-10 ore/kWh, which, says the State Power Board makes ground heat stores "extremely economically viable."

With such favourable cost estimates clearly a prime consideration, the Swedish government has sanctioned a major subterranean heat store construction programme with the aim of making large amounts of



Summer warmed lake water provides heating through Sweden's winters

summer and industrial waste heat available for heating during the country's long, bitter winters.

Taken to its limits of potential, the Swedish State Power Board calculates large-scale heat stores could supply about 15 terrawatt hours of heat per year—about 10 per cent of the country's total building heating requirement—mostly operating with heat pumps to boost low and medium temperature water held in store to temperatures suitable for district heating networks.

It is calculated that Sweden already has about 40,000 heat pumps installed—mainly for small-scale domestic applications—at least 25 of which are for large-scale heating projects. The largest single system currently

operating is of 10 megawatt capacity although the National Energy Administration plans in the near future to install a number of individual units capable of supplying 150 megawatts of heat to Stockholm's district heating network. These heat pumps will upgrade seawater temperatures to about 70°C for use in the network.

Estimates from the Swedish Building Research Council indicate that heat pumps have become so attractive in the country that 10,000 to 12,000 units a year are expected to be produced and installed in the mid-1980s and that Sweden is set to become a major exporter of the technology to the rest of the world over the coming decade.

## GOVERNMENT-FUNDED OFFICE AUTOMATION PROJECTS END

# Electronic office meets with qualified success

LEICESTERSHIRE policemen tried running their office diaries on an electronic system designed for dentists. Besides the chief constable being hesitant to be known as a tooth puller, the experiment was abandoned because it did not work.

This is one of the experiences told to a London conference on the government-funded office automation pilot studies, which ended last week.

Leicestershire Constabulary is one of 21 public sector organisations chosen over two years ago to act as guinea-pigs in the £5m government programme to

promote office automation and help develop competitive domestic suppliers of integrated office systems.

Each pilot was planned by consultants from the Computing Services Association who helped the Department of Trade and Industry (DTI) choose the organisations. They included The Cabinet Office supplied by Xionics, BBC Breakfast TV (Hewlett Packard), Cambridgeshire County Council (IBM UK), Walks Gas (Logica) and the Greater London Council (Rank Xerox).

The DTI could spend up to

£250,000 on each system and the organisation was obligated to use it for two years. Many users had never had any experience of computers. Leicestershire police used mainly manual typewriters and most of the civil servants in the Cabinet Office experiment had academic backgrounds, like classical history and anthropology. The conference was the first opportunity for 10 organisations to publicly make judgments on the pilots.

Most users warmed to the technology. While they did not want to draw general conclusions from what are quite specific experiments, the majority felt that the experiments were a success and no one wanted their systems removed. Some pilots have been more successful than others but only two—Brighton Health Authority and the IT division of the DTI—have been noticeably slow to show results. Manufacturers have benefited. They were allowed to spend up to 25 per cent of the pilot's cost on research and development. Where the trials have proved successful some organisations have ordered more

equipment, as in the case of British Rail Engineering who are spending a further £240,000 with their supplier, Information Technology Limited.

The pilots are being evaluated by the Economist Intelligence Unit who also organised the conference. A second conference will be held in London on October 10 and 11. (Telephone Christine Palmer: 01-493 6711.) The DTI is issuing short bulletins on the pilots. (Telephone the DTI on 01-213 4518/4491 for further information.)

PETER KNIGHT

## BANKING COMMUNICATIONS

# Telex room falls victim to integration

BY ALAN CANE

THE TELEX ROOM has become the first victim of the banks' demands for greater speed and efficiency in telecommunications. The SWIFT interface device or SID, the special computer which makes it possible for the banks to send and receive messages from SWIFT, the worldwide interbank secure messaging network, is running it a close second.

And while most banks have yet to install a CEAPS terminal, giving them the ability to interface with the big clearing (or settlement) banks to take advantage of electronic same-day clearing, already this device is being rendered obsolete.

What is driving all these sophisticated banking terminals to the knacker's yard is the emergence of a new concept in the banking world—integrated communications, essentially automated message switching with extra and highly specialised capabilities.

Why should banks need such a system? First of all, rationalisation of the untidy proliferation of terminals and spaghetti mess of wiring which accompanies the introduction of each new electronic service.

Admittedly the old-style telex rooms with its banks of teleprinters and tangle of paper tape has given way to video screens, keyboards and message switching computers in many banks, but the fact remains that every new electronic service a bank takes on board means another set of screens and keyboards—perhaps another complete computer.

So there is powerful pressure to integrate all these functions into a single switching unit—an electronic sieve, if you like, through which all incoming messages can be strained, sorted and directed to the appropriate destination. Some banks—Lloyds Bank International in the City of London can expect a peak message traffic from its telex system, SWIFT, CEAPS and its own inter-branch network of over 2,000 messages an hour.

Second there is efficiency, in an industry where time literally does mean money. Mr Norman Hoppe of Logica, a London-based computing services company best known in banking circles as the architects of CEAPS, points to the comparison between the speed at which a telex message reaches

the right recipient using conventional telex technology and using integrated communications.

First, conventional telex: the message is printed in the cable room in triplicate, torn off the machine, the top copy is authenticated and the copies matched up again. One copy is filed, and two copies sent by internal messenger to the right department. Time: one to two hours.

Using integrated communications, the computer accepts the call and the message is displayed for the operator to "repair" (authenticate) before routing to the recipients video screen. Time: five to 10 minutes.

Outgoing messages take only a few minutes more using integrated communications; conventional telex, up to 60 minutes more.

Many of the big banks have built, or are already quietly building, integrated communications systems to manage their message traffic but proprietary systems are available from banking software specialists such as Arbat (now part of the U.S.-based Control Data Corporation) and Logica.

The Logica system "Fastwire" is already up and running at Lloyds Bank International (LBI), Citibank's Lewisham communications centre and is in the final stages of commissioning at Kleinwort Benson.

At LBI, Mr Ernst Henneke, the manager in charge of technology, says the system substantially increases productivity: "It has reduced the time for sending a telex message from four hours to five minutes" and has completely replaced the bank's SID.

At Citibank, Mr Terry Bowley, Fastwire project manager, is using the system only as a SWIFT interface, but wants to add more functions. Mr Michael Childs at Kleinwort Benson said: "We decided to take Fastwire because it allows much higher throughput on our existing hardware and simplified our audit trails."

The core of the Fastwire system, Fastix developed by the U.S. company Freyberg Associates, now part of Logica, is being installed at the Bank of England and Barclays Bank, Logica says.

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## Equipment

# Add-on processing

THE DIVIDING line between sophisticated electronic typewriter and stand-alone word processor has become even more diffuse with the announcement by Hermes of a screen add-on for its Toptronic range of typewriters.

Hermes calls the result a "video typing machine" and the added screen and memory yields limited amounts of word processing.

The Toptronic 51/Video allows the typist to display several modes. It can be used as an ordinary typewriter, as a memory typewriter with 100 memory segments, as an external storage typewriter, or as a machine with sophisticated folder/document storage via the screen.

Several 2.5 inch discs can be read into the screen unit, each accounting for a "folder" which contains one or more documents. The information can be processed, updated and transferred from folder to folder with ease. A buffer store allows simultaneous printing of one document while another is being worked on via the screen.

There are two levels of the machine. The model 21 costs £1,695 and the 51 is priced at £2,795. More on 0286 845251.

## Terminals

# Colour graphics

LYNWOOD has introduced a colour version of its IBM business graphics emulation system. The company says that all pixels which make up the graphics are addressable and can emulate the IBM 3274 and four other screens. More details from Lynwood in Alton, Hampshire on 0420 87024.

# NORCROS.

## QUIETLY GOING ABOUT OUR BUSINESS

Norcros is seldom talked about in the High Street. Yet our building products and energy saving ideas have benefitted hundreds of commercial developments and thousands of private homes. And despite the inner tranquility afforded by our double glazing and cladding products, you rarely catch a whisper of our achievements in the office blocks of the world's business centres or in the relaxed comfort of family living rooms.

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LEGAL NOTICES

THE BROKEN HILL PROPRIETARY COMPANY LIMITED

(Incorporated in the State of Victoria)

The Broken Hill Proprietary Company Limited announces that a half-yearly dividend on the 344 374 848 issued fully paid shares of the company will be paid on 30th May 1984 to the registered holders thereof following the registration of Transfers received up to 5.00 pm on Friday 27th April 1984, the book's closing date. The dividend will be at the rate of 23 cents per share (being at the rate of 23 per cent per annum) payable in Australian currency, but in the case of shareholders who, not later than 19th April 1984, have elected that some or all of the shares held by them shall participate in the company's dividend investment plan, the dividend shall be satisfied in respect of those shares by the allocation of paid up shares in accordance with the plan. Transfers will be accepted for registration at the company's share registers at the following addresses:— Australia—Melbourne: 140 William Street, Sydney: 28 O'Connell Street, Adelaide: 41-47 Currie Street, Canberra: Arthur Young ANF Company, 40 Marcus Clarke Street, Hobart: Perpetual Trustees and National Executors of Tasmania Limited, 29 Murray Street, Brisbane: 244 Queen Street, Perth: 37 St. Georges Terrace, UK—London: 14 Hanover Square.

VENTURE CAPITAL

The May issue of THE BANKER will be discussing the increasingly significant role of VENTURE CAPITAL institutions—the long established and the many newcomers—in the market; also the rise of the USM in equity raising and the increasing role of national and regional government in financing new enterprise.

This important study in THE BANKER will provide an opportunity for the treasury function of venture capital operators to bring their activities before the worldwide wholesale and equity finance markets, which THE BANKER serves with distinction each month.

To advertise in this report please contact:

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CORRECTION NOTICE

SURVEY OF ITALY PUBLISHED 26th MARCH 1984

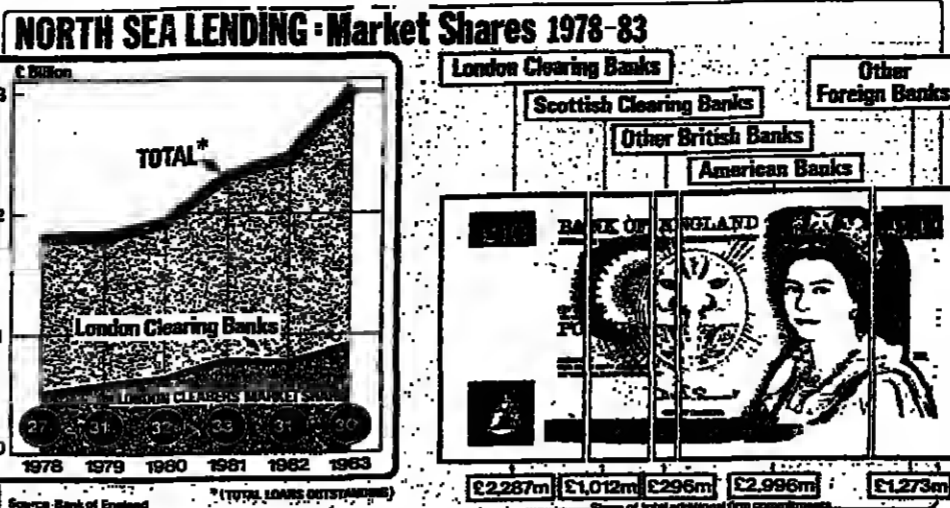
It is regretted that the figures showing the financial position of Crediop (Consorzio di Credito per le Opere Pubbliche—Public Law Credit Institution) - Rome should have been shown as at 31st December 1982 and not as erroneously printed as at 31st December 1983.

It is expected that the 1983 accounts will be approved in April. Provisional results indicate a net profit of over Lit. 140 billion after allocating Lit. 192 billion to reserves. The loan volume increased to Lit. 19017 billion. This is a considerable improvement over 1982.

ENERGY REVIEW

Bankers face greater North Sea risks

By Ian Hargreaves



LOTS OF people have done well out of Britain's £30bn North Sea investment boom, but none of the players in the offshore oil game has had a steadier run of success than the bankers.

"Sure it's been a good business," Mr Tom Ketchum, head of the London-based oil and minerals division of New York's Morgan Guaranty bank. "There is no international oil and gas project which has so far failed to meet its debt service. At least, not yet."

Mr Ketchum's note of warning, coming as it does from one of the most aggressive North Sea banks, reflects a growing mood among bankers that, as Britain gears up for its second offshore boom, risks are growing more rapidly than rewards. It also suggests that for British banks struggling to improve their sometimes faltering positions in the North Sea market, life is not going to get any easier.

Project lending has got riskier and the rewards have decreased, says Mr James Adamson, who is to Chase Manhattan what Mr Ketchum is to Morgan. "As marginal fields are developed, we may be approaching the point where people find out exactly how risky this type of lending is."

An illustration of just how tightly-pressed big North Sea deals have become is the recent \$400m loan syndicate led by Bankers Trust of New York and National Westminster for the development of the Sun Oil's Balmoral field—a marginal oil field where a miscalculation of costs could have serious consequences.

The initial interest rate on this loan is 1/2 of 1 per cent over the London interbank rate (Libor), rising to 1/25 per cent when (or if) the project reaches full earnings potential. The latter is considered a very low rate for this type of work.

Although details of the loan have not been made public, Sun is said by bankers to have succeeded in cutting other corners, for example, over commitment fees. NatWest was the only British name in the 14-bank syndicate. Nor did Chase, which has some claim to the title of the world's leading energy bank, appear on the tombstone.

The other important point about the Balmoral loan is that like several other deals in recent years in the North Sea, it is a so-called limited recourse project loan, which means that a large slice of the lending is secured not against the balance sheet of the borrower, but against the cash flow from the

field itself. The loan has corporate backing from Sun until completion tests are carried out on the production platform in 1986.

The main attraction of project borrowing for an oil company is that it allows the cash flow of a field to be matched exactly against a loan, while at the same time setting a large piece of borrowing at one remove from the company's balance sheet.

However, if something goes wrong with a field once the non-recourse stage of a loan has been reached—a drastic cost overrun, a major technical hitch, or a sharp drop in the price of oil or radical tax changes—the banks might not get their money back. "It's getting pretty close to equity financing," says Mr Ketchum.

Mr Roger Byatt, who has just completed a stint as head of NatWest's energy division, one of the more successful British energy banks, says the bankers to Balmoral weighed up the risks carefully and conservatively, especially in estimating the amount of recoverable oil in the field contents.

In any case, he adds, even a deal like Balmoral, the terms of which reflected tough competition, provide the banks with almost a 2:1 cover ratio, meaning that they have loaned at most 50 per cent of the anticipated discounted cash flow of the project. Today's North Sea project loans, he says, "are probably less risky than financing a garage in Dorking."

The point everyone agrees is

that competition among banks for North Sea business has stiffened significantly in the decade since NatWest made its first big UK energy project loan, for BP's Forties Field. Project lending, as opposed to various forms of corporate fund-raising, is estimated to account for about a quarter of UK North Sea capital spending needs, currently running at well over £3bn a year.

The changes stem partly from the fact that large energy loans, along with other loans for large capital projects, have become more fashionable as sovereign loans have lost their allure. Although American competition has been fierce in the North Sea from the beginning, French, Canadian and, more recently, Japanese banks have been active.

But as more banks have swarmed to the honey-pot, it has inevitably become less of a seller's market and cover ratios have come under periodic pressure—a ratio of 1.3:1 is the lowest to have been quoted on the UK North Sea circuit offered, it is said, by a French bank.

So, as bankers look back to what Mr Byatt recalls as "the golden age of financings"—when in the late 1970s, the banks were able to demand 2.5 to 3 per cent of the oil out of the Piper and Claymore fields as their price for a loan—they fear that still more competition and greater complexity lie ahead.

According to Mr Ketchum one of the more worrying trends is

the way that oil companies have started to insist that the underlying assumptions used in setting loan conditions should be their own or those of their consultants, rather than terms set by the banks.

This point can be crucial, since forecasts of the price of oil or the taxation regime determine the likely cash flow of the project which secures the loan. The fall in the oil price last year and the persistent anxiety that it may fall further, has done more than anything to send shivers through the energy banking community. This is hardly surprising, since some of them are sitting on loans based upon the assumption of oil at \$35 a barrel (it is now under \$30), and rising at world inflation rates in the next decade.

Most banks are currently working on a base forecast of oil at \$30 a barrel until the end of next year and rising with inflation thereafter. Taxation is almost equally problematic, since loans being written for the North Sea today will extend well beyond the next general election.

It has become common for oil companies in Britain, as in other less politically stable parts of the world, to ask the banks to accept political risk. In Egypt, for instance, this might mean a bank waiving its right to repayment should the oil company's assets be nationalised. But in Britain, banks find themselves being asked to provide warrants against major tax changes, dur-

ing the life of the loan. The theory is that a government might listen to bankers more carefully than to oil companies before changing the tax rules—a theory which many bankers disbelieve even as they scramble for the business.

"The bankers are lending the money, so they should be able to control the assumptions," says Mr Ketchum. Negotiations about the assumptions have become so complex and long-winded that some oil companies steer clear of project finance altogether.

None of this, however, means that banks like Chase or Morgan are planning to scale down their activities, either in energy in general or in the North Sea. The philosophy of the leaders seems to be ride out the hard times, while attempting to push the risk-reward pendulum back in favour of the banks, both through negotiation with customers and by judicious public pronouncements. Mr Adamson recently vented his worries in the Institute of Petroleum's Journal, which, he agrees, may win him a reputation for caution.

"I have no problem with that," he says. "Caution has always been a sensible part of energy lending." Morgan, which claims to have been involved as lead manager in over 90 per cent of North Sea project loans in the last five years, may also find it difficult to hold its market share, says Mr Ketchum, as newer competitors from Canada, the U.S. and the Continent offer lower prices and accept higher risks.

But what about the British banks? How are they faring under these conditions, where innovation and a taste for pushing the frontiers of risk are crucial to the ability to win business?

The overall impression is that five years after a Wilson Committee research report on North Sea oil praised them for their expertise and decisiveness, the London clearing banks have been losing market share chiefly at the hands of the Americans.

Of the London clearers, NatWest and Barclays are the only two that figure in anybody's top six in the North Sea, the others being by more or less general assent Chase, Morgan, Citibank and one of either Chemical Bank, Bank of America or Bankers Trust.

Two of the London clearers—Midland and Lloyds—have made virtually no impact. The Scottish banks have done better,

especially in building relationships with the offshore suppliers and smaller oil companies which NatWest has tended to underplay.

"The British banks have not performed as well as the competition," says Mr Mike Unsworth, chief energy analyst with brokers Scott Goff. "If you want my honest opinion," says one foreign banker, "they were fast asleep."

Barclays and NatWest, both of which have large, specialised energy teams, challenge this. The Americans, they say, took an early lead because of their experience in oil lending and retained it because so many oil companies are American.

Still, the fact remains that over a decade into the British oil boom no British bank has won sole leadership of a syndicated North Sea project loan, although NatWest is about to break this run of ducks by being named sole leader manager for a \$250m syndicate for Total Oil Marine's development of the Alwyn North field.

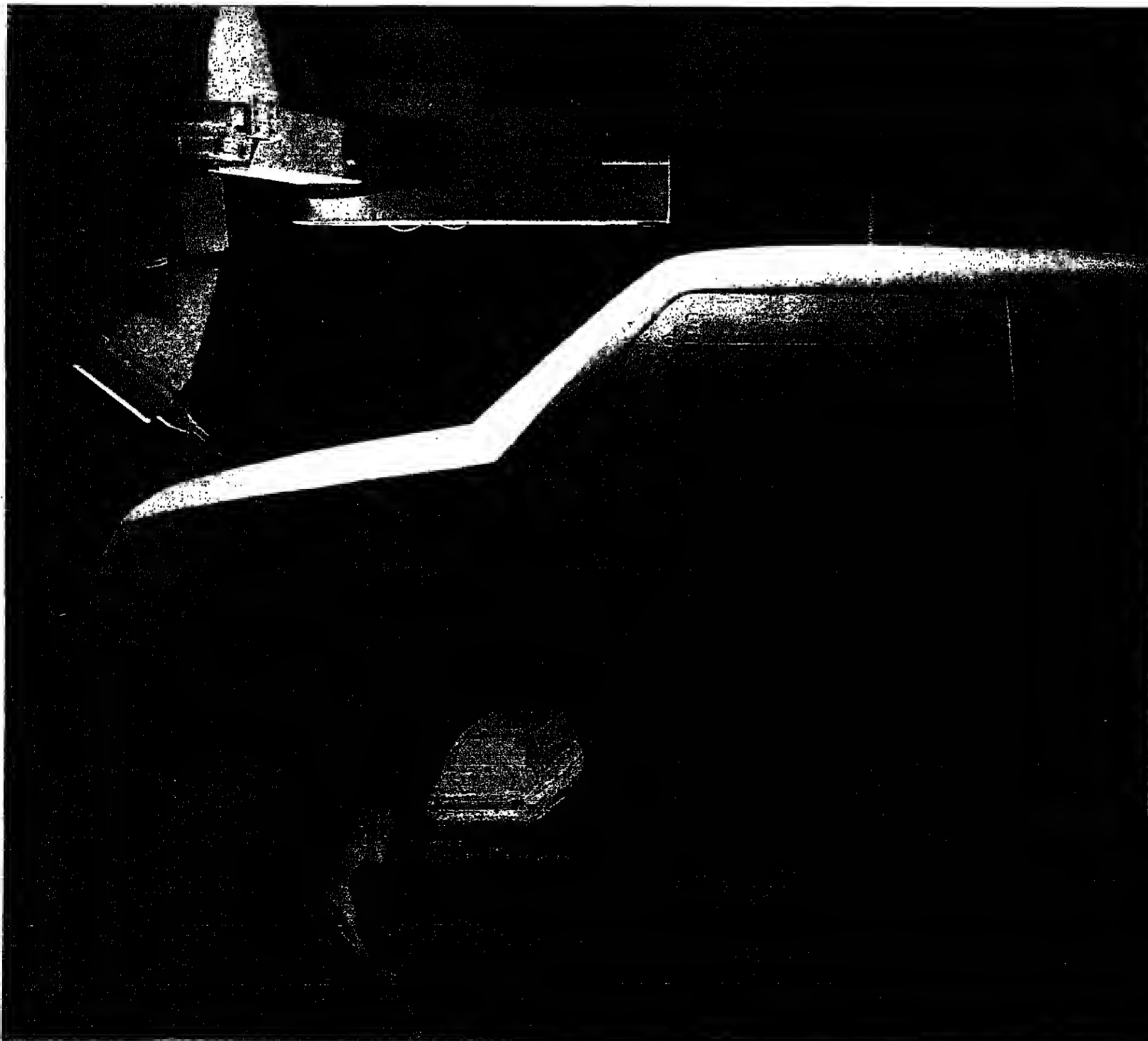
According to Mr Unsworth, the clearers have displayed characteristic sluggishness in fixing project loans for the smaller oil companies which last year bought small stakes in BP's Forties field. Most of that business has gone to American and Scottish banks.

Mr David Ferguson, finance director of Lasmo, one of the smaller oil companies which struggled to raise finance in the 1970s, says the role of British banks in Lasmo's life has greatly diminished in the past four years. Anxious to arrest this trend, he asked Morgan, lead manager on a project loan for the Beatrice field, to invite several British banks, but three of them turned it down. Only NatWest ended up on the tombstone.

Of course, if the worst fears of the energy bankers turned out to be correct, those banks which had exercised greatest caution would be wearing large smiles.

However, even those banks with problem loans on which they are known to have suffered production difficulties insist that they are comfortable with their positions.

Because the market still, fundamentally, looks attractive, competition is likely to remain fierce, ensuring that if the price of oil falls, bankers' nerves will be tested further. To get through a second decade in the North Sea without losing a cent may be asking just a little too much.



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\$3 a share sweetener added to Shell offer

By Terry Dodworth in New York ROYAL DUTCH/SHELL has thrown a \$3 (€2.09) a share sweetener into its tender offer for the outstanding 30 per cent of Shell Oil, its U.S. affiliate, only days after it insisted it was not increasing its original \$58 a share bid.

The Anglo-Dutch oil group changed tack yesterday after it became clear that Wall Street could not be forced to make a higher offer. Although Shell Oil's share price fell sharply from \$60 before the tender offer was announced on Thursday, it has remained persistently above \$55 and rose to \$57.5 immediately after the \$58 a share offer was announced yesterday.

Technicians win 32½-hour week at Westland's

BY DAVID GOODHART, LABOUR STAFF

TECHNICIANS AT Westland Helicopters based at Yeovil have won a 32½-hour week after agreement between the company and Tass, the white-collar engineering union. The deal, which ended a four-week strike by 1,700 Tass members at Westland's three sites, has been welcomed by trade union leaders as a breakthrough in the drive for the shorter working week.

and the EEF are not expected to produce any significant drop in the present 39 hour week for manual engineering workers. The deal at Westland, while significant, will apply initially to only 200 designers and planning engineers out of the 2,000 technical staff. The company has granted the drop in hours from 37 to 32½ only to those staff who will be working a new double shift system computer aided design (CAD).

Westland emphasized that the new shift system would apply to all new starters. It said rates of pay and hours would not be changing for the majority of staff. Those in the grades affected by the shifts now earn (before lump-sum and premium payments) between £8,085 and £10,896 on basic rates. A number of companies who are seeking greater utilisation of CAD may follow the Westland deal in spite of the cost. CAD, while allowing draughtsmen to improve their working conditions, is also reducing the numbers employed.

The smart phone that can bark at

By David Marsh in Paris

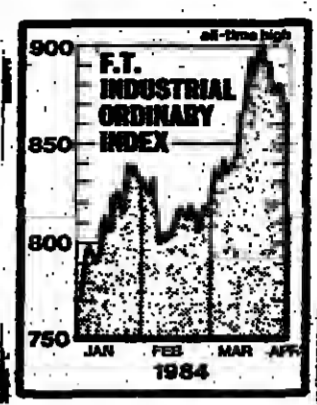
A TELEPHONE which will enable company bosses to call numbers by bar-coded instructions into a microphone has been unveiled by Thomson, the French state-owned electronics group.

The system may go on sale around Christmas, making it the world's first voice-controlled telephone. It has been developed after more than two years of technological effort in co-operation with CNET the French state telecommunications laboratory. Thomson yesterday described the device as a gadget of status symbol value with a retail price perhaps in the range of FF9,400 to FF9,500 (£348 to £435).

THE LEX COLUMN Hanson after its own image

The harpoon tactics so successfully employed by Hanson Trust for acquisitions in the UK have been eschewed by Hanson Industries, the U.S. arm of the group, in favour of more old-fashioned fishing expeditions. These have provided scant reward over three patient years — another tidder finally got away only this week — and Hanson has yet to hook U.S. industries. But it has timed its latest cart with characteristic finesse, both to catch U.S. industries on the point of a promising recovery and to favour the immediate tactical position of its bid.

Index fell 11.6 to 859.2



have been broken, the speed of its depreciation is nothing like fast enough to provoke any serious action by the authorities. Yet the discount market, true to form, is taking little on trust. It has been busy this week protecting itself against a possible increase in rates by selling the Bank of England's long-dated bills. One house, however, has been a little more retiring than the rest. Gerrard and National's financial year ends tomorrow and, in these difficult days, it does no harm to display a well-stocked balance sheet.

Christies The disappearance of Sotheby's into the opaque realm of private ownership has not diminished the commercial rivalry between London's two leading auction houses but it has deprived the market of any obvious stock with which to compare Christies International. Parked ignominiously in the Industrial (Miscel.) sub-sector of the All-Share Index, Christies is a distinct oddity. In this instance, rarity seems to be doing no harm. Christies' shares have been bounding up all year and yesterday the company underwrote the market's optimism with the announcement that pre-tax profits in the year to December had more than tripled to £9.7m. The final dividend has been lifted, after three years of stagnation, to put the shares on a yield of 3.6 per cent at last night's price of 368p.

Commissions One after another, fixed commission structures in the world's stock exchanges are falling victim to the international drive for financial deregulation. This week brokers on the Australian exchanges are finding out about negotiated commissions the hard way — as it happens, the new order has been inaugurated in flat markets with exceptionally low trading volume; next Monday the London market is exposing its gilt-edged brokers to the winds of fixed but reduced commission rates; and now even the conservative Japanese authorities have placed the freeing of commissions on a decorously remote part of their liberalisation agenda.

Sterling It is almost precisely a year since sterling last slipped below 90 on the trade-weighted index but, in contrast to last spring's flurry of official concern and market jitters, the currency's present weakness is being treated with studied calm. While sterling's recent habit of moving in the same direction as the dollar against the continentals seems temporarily to

U.S. telecommunications group considers stake in Mercury

BY JASON CRISP

A LEADING U.S. telecommunications group is considering buying a major stake in Mercury, the privately owned UK communications company set up to compete with British Telecom. Pacific Telesis, one of the seven regional companies formed by the break-up of American Telephone & Telegraph, has held discussions with the British Government as well as the Mercury shareholders.

Barclays Merchant Bank (20 per cent). There has been growing concern that Mercury, which has an exclusive licence to compete with British Telecom, might not be successful commercially. Barclays Merchant Bank has already indicated it wishes to sell its stake. There are several hurdles to be overcome before Pacific Telesis could or would invest in Mercury. It would require British Government approval. Although the Government would strongly object to foreign control of Mercury, it would consider a minority holding. Pacific Telesis is thought to be interested in taking up to a third of Mercury's equity, which would be too high for the Government.

waiver which would allow it to market products and services overseas. The U.S. Department of Justice has raised a number of objections to the Pacific Telesis request. There is also doubt about the operating licences and regulatory framework in the UK. These are likely to have a significant impact on the success or failure of Mercury, which has committed capital investment of £98.6m to date and is expected to invest a total of £11m by the end of the decade, and could affect Pacific Telesis's interest in the venture. A British company is considering taking a smaller stake in Mercury. It is not thought to be in competition with Pacific Telesis and would be buying part of the stake held by Barclays Merchant Bank. The operating licence for BT and possibly also Mercury is expected to be published later this month for discussion in parliament.

NatWest to lead £225m North Sea loan

BY IAN HARGREAVES

NATIONAL Westminster Bank, the second largest British clearing, is to lead a £225m syndicated loan to Royal Dutch/Marine for development of the North Alwyn field. This is the first time that any British bank, in over a decade of project lending in the North Sea, has won the position of sole lead manager of a syndicated project loan. It will involve the bank in negotiating the terms of the deal, in return for which NatWest will receive the lead manager's fee.

Although details of the loan have yet to be announced, it is understood that the syndicate comprises 12 banks, four British, two U.S., five French and one German. Previously, most North Sea project loans have been dominated by U.S. banks. Total Oil Marine, which is the UK subsidiary of Compagnie Francaise des Petroles, owns a third of North Alwyn and is the field operator. Its partner is Elf, another French oil company.

The two companies are expected to spend over £2bn developing the field, which is expected to yield about 200m barrels of oil. Elf has already floated £40m bond for the project and may shortly launch a second. The NatWest-led loan is understood to be on a limited recourse basis. This part of the loan will not be guaranteed by Total but will be secured against the cash flow from the project. Some bankers are

arguing that terms being extracted from banks for this type of loan make it too risky to finance increasingly complex technology used to develop marginal fields. The other banks in the Total syndicate are expected to be: Barclays, Lloyds Bank International, Midland, Bank of America, Chase Manhattan Banque Nationale de Paris, Crédit Lyonnais, Banque Indosuez, Paribas, Société Générale and Commerzbank.

IBM lifts Intel stake

BY PAUL TAYLOR IN NEW YORK

IBM of the U.S., the world's largest computer manufacturer, has again increased its stake in Intel, the semiconductor manufacturer. IBM reports in a Securities and Exchange Commission (SEC) filing that it has increased its stake in the chip-maker to 29 per cent of 22.3m shares, including 1.38m shares acquired in over-the-counter trading between March 1 and March 26 at prices ranging from \$34.75 a share to \$37.32 a share.

Before the latest announcement, IBM held an 18.8 per cent stake. IBM first acquired a 12 per cent stake in Intel in February last year and has gradually boosted its holding towards the 30 per cent ceiling agreed by the two companies. Honeywell, the U.S. data processing and control systems group, said yesterday in an SEC filing that it has boosted its stake in ISSC (Industrial Solid State Controls).

Miners Continued from Page 1

by the effects of the rail unions' action in support of the miners as the British coalfield depot 60 drivers walked out, halting the Merseyrail suburban network and affecting up to 10,000 commuters, when a train-driver had refused to move a coal-train from a siding was disciplined. The National Union of Railwaysmen warned that similar difficulties could affect the London-Glasgow main line, because of possible action by signalmen at the key Warrington power-box. The number of drivers refusing to handle coal-trains was about six, half the 12 of the first day of the action. BR remains relatively sanguine about the effect of the handful of cases though rail unions were warned at a meeting with the BR Board yesterday of the possible immediate financial implications of the action. The decision by the executive of the National Union of Seamen to instruct the union's 25,000 members to black all coal movement was accompanied by an instruction to foreign-going seamen to prevent the loading of UK-bound coal in foreign ports. Action affecting export of British coal, however, has been avoided. Steelworkers are most at risk from the NUS decision, because British Steel imports about 2.5m tonnes of special coking coal every year for its blast-furnaces. Jim Storer, NUS general secretary, said, however, he hoped steel jobs would

not be jeopardised. Leaders of the rail, ship and lorry unions meet tomorrow to discuss the miners' action. In the coalfields the number of pits working normally rose to 43—three more than on Monday and 15 more than last week—though the number actually on strike stayed stable at 121. Kevin Brown writes: Mrs Margaret Thatcher was cheered by Tory MPs in the Commons yesterday as she repeatedly called for a national ballot in the miners dispute. "I am concerned that the miners should have a chance to express their views in their right to go to their place of work and earn a decent living," she said at Question Time. Mr Neil Kinnock, the Labour leader, avoided commenting on the dispute from the despatch box in spite of demands from Tory backbenchers for his views on a ballot. His reluctance to be drawn was highlighted by Mr Alan Beith, the Liberal Chief Whip who also said Labour had allocated none of its own parliamentary time for a debate on the dispute. Mr Bernard Weatherill, the Speaker, turned down an application for an emergency debate yesterday. He noted, though, that pressure was increasing. A full-scale debate appears likely soon, however, in view of the head of steam building up behind complaints from mining area MPs about police tactics in the coalfields.

Continued from Page 1

TUC

"This could be done by amending the Bill so as to enable a union lawfully to retain its existing arrangements where they receive majority support in a secret ballot of the union's members." Proponents of the TUC scheme, which includes prominently the Engineers and Managers' Association and the electricians' union, accept that if such ballots, which would be organised by the unions themselves, went against present arrangements it would be a full endorsement of the Government's proposals. Mr Murray says that if the offer is not taken up it will be a further indication of the hollowness of the Government's claims to be 'giving trade unions back to their members' and 'safeguarding the rights of members in relation to their unions.' Central to the TUC argument in favour of its proposal is opposition to the Government's desire to impose on unions specific electoral requirements irrespective of members' wishes. Mr Murray argues in his letter that this principle is enshrined in international labour law, as ratified by the UK, and declares the TUC's intention to ask the International Labour Organisation's Committee of Experts to examine the Government's Bill in the context of ILO Convention No. 87, on freedom of association. The TUC says that the Bill could "upset the balance of many unions' internal arrangements and cause serious and unpredictable organisational difficulties." It doubts that some Government proposals, such as direct elections by members for union executive posts, will necessarily ensure a fairer and more representative outcome than same direct elections.

World Weather

Table with columns for location, day, and weather conditions. Locations include Algiers, Athens, Bombay, Buenos Aires, etc.

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INTERNATIONAL CAPITAL MARKETS

Eurobond market awash with \$900m in issues

BY MARY ANN SIEGHART IN LONDON

A FLURRY of new issue activity hit the Eurobond market yesterday with nearly \$900m worth of deals being launched. The biggest and most original was a two-tranche floating rate note for Broken Hill Proprietary, Australia's largest company...

Thyssen chief rides the storm

By James Buchan in Bonn

HERR Dieter Spethmann of Thyssen was always a grand man. Perfectly dressed, ever untanned, superbly articulate in German and English, he exuded power and arrogance...

LEHMAN BROTHERS IN QUEST FOR MORE CAPITAL Trading in a new image

BY TERRY DODSWORTH IN NEW YORK

MR Lew Glucksman has generated virtually non-stop controversy since he moved to the top of Lehman Brothers Kuhn Loeb, the venerable, 130-year old Wall Street investment bank, late last year. His managerial methods are, to say the least, abrasive, and the signs are that many of the old school of discreet corporate financiers, have not found it particularly easy to adapt to them.

Texaco not interested in Gulf UK units

By Ian Hargreaves in London

TEXACO yesterday completed its \$250m acquisition of Standard Oil of California's European marketing and refining operations, but denied any immediate interest in the UK downstream assets Social is in the process of buying through its merger with Gulf.

FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. The following are closing prices for April 3.

Table with columns: Country, Issue Name, Maturity, Yield, Price, Change. Includes sections for US STRAIGHTS, EUROPEAN STRAIGHTS, DEUTSCHE MARK STRAIGHTS, SWISS STRAIGHTS, and YEN STRAIGHTS.

OTHER STRAIGHTS

Table with columns: Country, Issue Name, Maturity, Yield, Price, Change. Includes sections for AUSTRALIA, CANADA, DENMARK, FINLAND, GERMANY, GREECE, HONG KONG, INDIA, ITALY, JAPAN, KOREA, MALAYSIA, NETHERLANDS, NORWAY, PORTUGAL, SINGAPORE, SOUTH AFRICA, SWITZERLAND, THAILAND, UNITED KINGDOM, and USA.

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INTL. COMPANIES & FINANCE

Japan puts broker fee liberalisation on agenda

By Yoko Shibata in Tokyo

JAPAN'S Ministry of Finance (MoF) has placed the freeing of commission rates for stock dealing on its liberalisation agenda. Japan is one of the few industrially advanced countries not to have either freed brokering rates or to have set a timetable for doing so.

At present, under the Securities and Exchange Law, Japanese brokers charge fees set by the exchanges. These range from 1.25 per cent for deals of less than ¥1m to 0.55 per cent on deals over ¥100m (\$445,000). The fees and the method of fixing them have been exempted from the country's anti-trust legislation.

Dissatisfaction with the fixed fee system has been particularly strong among Japan's commercial banks. They are not only major institutional investors in their own right, but have also been suffering from the onslaught of the brokers into their own traditional areas of activity. Hence the banks have been pressing for the ending of fixed commission dealing as part of the wider financial and capital market liberalisation that is taking place.

Large investors generally are keen to end the fixed fee system—looking enviously at the buoyant pre-tax profits being made by the big brokers as they benefit from the bull market.

Of the leading security houses, Nomura, the largest, is expecting a 60 per cent rise in pre-tax profits for the half-year to March 1984. Daiwa is expecting a 90 per cent rise, Yamachi a more than doubling, and Nikko an increase of 80 per cent.

The "big four" brokers are expecting commission earnings to rise between 50 and 60 per cent in the same half on revenues up by between 60 and 70 per cent. Nomura is forecasting first-half revenues of ¥200bn and commission income of ¥78bn; Daiwa revenues of ¥120bn and commission of ¥52.5bn; Nikko revenues of ¥119bn and commission of ¥52.5bn; and Yamachi revenues of ¥112bn and commission earnings of ¥50.3bn.

The liberalisation of European bond issues for Japanese companies which came into effect on Monday is expected to lead to much greater competition because the lead-management of bonds will now be opened up for foreign brokers and the rates deregulated. This is likely to have some impact on domestic rate fixing.

The Ministry has therefore decided that it must launch a major study of the freeing of brokerage rates before it takes Japan cannot long stand against the worldwide move in this direction. The study will look at the result of such moves elsewhere.

Y100bn convertible issue by Matsushita Electric

BY TERRY FOVEY

MATSUSHITA, ELECTRIC Industrial, the world's largest integrated electrical goods manufacturer, has announced that it is to launch a ¥100bn (\$445m) of unsecured convertible bonds on the domestic market. This is the largest ever issue of such bonds by a private Japanese company.

The bonds are due to be issued in May and will be priced at par with the coupon rate still to be decided. The issue is being led by Yamachi Securities and underwritten by a syndicate involving the other three members of the broking "big four"—Nomura, Nikko,

and Daiwa. Although Matsushita's stock is traded outside Japan on the Amsterdam, Dusseldorf, Frankfurt, Hong Kong, New York, Pacific (U.S.), and Paris exchanges, the convertibles will not be sold to U.S. investors. According to the company the money raised will be used to make capital investments in new media equipment manufacturing facilities.

The bonds are to be convertible—on terms still to be announced—from July 2 this year until May 19 1994, but interest will be paid twice yearly (May and November).

The bonds will be issued in ¥1m denominations. Matsushita, which sells its products under the brand names Panasonic, National, Technics, and Quasar, and also owns just over 50 per cent of JVC (the consumer electronics major, earlier reported a 16 per cent rise in group net earnings for the year to November 30 to ¥182.7bn and a 9 per cent increase in sales to ¥3,988bn).

The company is currently engaged in a major capital spending programme spanning most of its divisions, but especially in semi-conductors (¥110bn).

BHP and GE sign Utah deal

By Lachlan Drummond in Sydney

BROKEN HILL Proprietary Company (BHP) has completed the acquisition of Utah International from General Electric of the U.S. more than a year after the US\$2.4bn deal was announced.

The determination of both sides to complete the sale is reflected in the delay, in the fact that GE has retained a 15 per cent stake valued at US\$275m in the Queensland coal interests held by Utah, and in BHP's compromise position of 35 per cent and 47 per cent stakes in the two consortia which make up the expanded Utah BHP coal operations.

The signing of the deal in New York yesterday as well as transferring the ownership of the Queensland Coal assets, gives BHP a geographic and mineral diversification. Other Utah interests include steaming and coking coal mines in the U.S., a copper/molybdenum mine in British Columbia, Brazilian iron-ore interests, and a half-share in a large and rich undeveloped copper deposit in Chile.

Setback for Mobil Australia

MELBOURNE — Mobil Australia has reported a A\$33.2m (US\$50m) after-tax loss for 1983, compared with profits of A\$1.24m in 1982, on turnover of A\$2bn against A\$1.9bn.

Mr George Pusack, the chairman, said sales volume dropped to 5.5bn litres in 1983 from 5.9bn the year before and Mobil had to borrow A\$82m to enable it to continue in business.

Strong initial demand for foreign commercial paper in Japan

TOKYO — Commercial Paper (CP) and Certificates of Deposit (CD) issued abroad are meeting strong demand from Japanese companies with surplus funds.

Banks and securities companies in Japan launched the sale of overseas CP and CDs on Monday with the minimum CP issue set at ¥200m (\$890,000) and that for a CD at ¥300m, the same as the minimum amount for yen-based CDs issued in Japan.

Daiwa Securities said its first-day sales of overseas CP and CDs totalled about \$50m.

Nikko Securities said its sales, which involved only overseas CP, amounted to \$20m.

Both Daiwa and Nikko said demand remained very strong yesterday and they expect this to persist as Japanese corpora-

tions are always looking for an attractive market for funds.

Nikko Securities said the overseas CP-CD market in Japan would develop into a major short-term money market, comparable with the existing domestic CD market and the Gensaki bond market with repurchase agreements.

Growth would depend on the yields on overseas CP and CD's and on foreign exchange rates.

The yen-denominated CD market had an outstanding balance of ¥5,600bn and the Gensaki market ¥4,200bn at the end of 1983. They are the only open money markets in Japan.

The Ministry of Finance has approved a repurchase agreement formula for the overseas CP-CD market, giving investments in those instruments high liquidity.

Although the overseas CP-CD market is expected to approach the size of the domestic CD and Gensaki markets before long, Japanese banks and securities houses will probably give priority to the Gensaki market, as the volume of outstanding Japanese bond issues is much larger than that of overseas CP and CDs available in Japan.

One advantage of the overseas CP-CD market is its exemption from securities transaction taxes which are applied to the Gensaki market, said brokers.

Japanese banks are likely to be less active than securities houses in selling overseas CP and CDs because they issue yen CDs, and if the yields they offer on the new instruments are too attractive, investors may switch deposits to them.

Keppel Shipyard suffers net loss in second half

SINGAPORE — Keppel Shipyard swung to a \$82.2m (US\$1.05m) group net loss in the last six months of 1983 from a \$44.8m net profit a year earlier. Earnings attributable to shareholders, before extraordinary items, fell by 87.4 per cent to \$810.8m for the full year.

Group turnover at the government-controlled shipbuilder edged up 3.3 per cent to \$866.3m in 1983. Investment and other income surged by 65.2 per cent to \$872.7m.

The company blamed a decline in demand for ship-repairing, shipbuilding and offshore rig orders for the drop in earnings. Keppel warned that group pre-tax profit in 1984 may not be maintained at the \$228.4m of 1983's because of higher interest expenses

Some \$67.6m in extraordinary gains stemming mainly from a surplus on the valuation of replacement assets, held the 1983 decline in net profit attributable to shareholders at 6.9 per cent to \$880.0m.

Keppel has proposed a one-for-two rights issue, at \$32 a share to support the company's continuing growth. (Keppel shares closed at \$32.22 yesterday.) During 1983, Keppel acquired all of Malayan Motor and General Underwriters, an 82.2 per cent stake in Straits Steamship, and a 9 per cent holding in Asia Commercial Bank.

Keppel has declared a first and final net dividend of 5 cents a share. The gross 1983 dividend of 12 cents compares with 25 cents in 1982.

The results of an effective international strategy

CA Banking Group Balance Sheet total in AS Billion.



"Creditanstalt has accepted the challenge of the future and its problems will not take us or our customers unawares. This is why, in the past year, we have intensified our strategic planning and made every effort to strengthen our orientation towards future developments."

From the statement by the Chairman, Dr. Hannes Androsch.

For a copy of the 1983 Annual Report please write to the Head Office Public Relations Department or to one of the Branches at the addresses below.

Salient figures	CREDITANSTALT			CA BANKING GROUP		
	AS Billion	Increase over 1982	US\$ Billion	AS Billion	Increase over 1982	US\$ Billion
Loans	172.5	+13.3%	8.92	211.1	+11.7%	10.92
Due from banks	71.7	+ 1.9%	3.70	77.4	+ 1.9%	4.00
Securities	35.8	+ 9.8%	1.85	48.3	+11.6%	2.50
Deposits	280.3	+ 9.7%	14.49	341.5	+ 9.3%	17.65
Net worth	9.9	+20.2%	0.51	12.2	+22.0%	0.63
Balance Sheet total	300.9	+ 8.6%	15.56	365.9	+ 8.4%	18.92

CREDITANSTALT Austria's leading international bank

Creditanstalt-Bankverein Head Office: Schottengasse 6, A-1010 Vienna. Telephone: (0222) 6622-2149. Telex: 133030. London Branch, 29 Gresham Street, London EC2V 7AH. Telephone: (01) 726 4511. Telex: 694812. New York Branch, 717 5th Avenue, New York, NY 10022. Telephone: (212) 308 6400. Telex: 239895/424700.

**Central American Bank for Economic Integration (CABEI)**

**U.S. \$20,000,000**

Floating Rate Serial Notes due 1994

For the six months 5th April, 1984 to 5th October, 1984

In accordance with the provisions of the Notes, interest is hereby given that the rate of interest has been fixed at 11% per cent. per annum, and that the interest payable on the relevant interest payment date, 5th October, 1984 against Coupon No. 11 will be U.S. \$470.2L

The Industrial Bank of Japan, Limited Agent Bank

**Conti Gummi to expand in SA**

CONTINENTAL Gummiwerk, the German rubber company, is hoping to use South Africa as a springboard to penetrate Southern Africa.

The company already markets conveyor belting in South Africa and believes that its association with the German motor vehicle makers, Mercedes, Audi, Volkswagen, and BMW will help persuade their South African subsidiaries to switch to Continental's tyres.

**NOTICE TO BONDHOLDERS MATRAN VOIMA OSAKEYHTIO**

9 1/4% 20,000,000 European Units of Account 1975-1985 Guaranteed Bonds

Pursuant to the provisions of the Purchase Fund notice is hereby given to bondholders that nominal UA 411,500 have been serviced by the Purchase Fund during the twelve-month period from 22 1/2 1983 to March 24, 1984.

AMOUNT SERVICED: UA 15,713,000 April 2, 1984

**Aksjeselskapet KOSMOS**

has acquired

The Norwegian paper and pulp company

**Saugbrugsforeningen**

In this transaction Aksjeselskapet Kosmos was advised by

**Lazard Brothers & Co., Limited**

**INTL. COMPANIES & FINANCE**

**Foreign banks tempt India to widen international bond market activity**

BY JOHN ELLIOTT, RECENTLY IN BOMBAY

INDIA IS likely to enter the fixed rate international bond market for the first time in coming months, for about \$50 to \$100m. It wants to test its international credit rating after five years gradually building up its foreign commercial borrowings, which totalled about \$1.2bn in the financial year now ended.

Foreign banks from the U.S., Europe and Japan are encouraging it to borrow more, and are trying to cash in on its potential as a major customer by offering large loan packages.

They are also applying for licences to increase their representation. The restraints on this may be marginally eased soon, because the Reserve Bank of India is considering relaxing its demands for reciprocal branches abroad in the case of some banks from major capital exporting countries.

At least one major Indian Government-controlled financial institution expects its foreign borrowings to rise by 20 per cent a year for the next two years. But the Government's general line is that the commercial total should not rise above the \$1.5bn ceiling agreed with the International Monetary Fund.

All the foreign borrowing has been project related, whereas the bond being considered by the Government and the Reserve Bank of India would be for general use. There are some reservations in the Bank about the difficulty of controlling or stopping a trend of general bonds once the first has been issued. But, more importantly, the idea of fixed rate borrowing appeals to India.

The foreign bankers now flocking to Bombay and Delhi for business are echoing the growing view of industrialists from many countries that the Indian market is one of the most promising in the coming decade, despite some short term and medium term economic problems, including inflation and repayment of loans.

In particular, they are attracted by the gradual opening up of the economy and by the country's booming oil production, despite some short term and medium term economic problems. The Bombay High Oil Field is likely to boost oil output from 27m tonnes to 30m tonnes this year, which is a significant contribution to the country's balance of payments and overall budget deficit.

Mr David Rockefeller (right), the former chairman of Chase Manhattan who now heads the New York bank's International Advisory Committee, lobbied for wider foreign bank representation in India in a recent visit. Chase is prominent among organisers of overseas loans to the country, and is one of the most active banks in pressing for a licence to operate there



In order to bolster its balance of payments, and possibly also to boost slow industrial investment, the Government is also encouraging investments from Indians living abroad. It has accumulated \$2.4bn of these funds, mostly in bank deposits, and there is a net inflow of \$400m a year.

UK merchant banks, including Hambro and Hill Samuel, are showing an interest in channeling the funds to India and plans for investment companies have been drawn up by subsidiaries of India's two largest industrial families of companies, Tata and Birla.

One of the most active foreign banks pushing for a licence to operate in India is Chase Manhattan which is one of about a dozen foreign banks with only representative offices. It is prominent among organisers of overseas loans for India and is reported to be offering a \$300m loan in addition to a \$30m loan it is leading for ICICI.

Major borrowers Bombay bankers expect to enter the market within the confines of the Government's policy include both Air India and Indian Airlines. These Government-owned organisations need \$2bn or \$3bn each for major aircraft purchases now being finalised, and this year may need up to \$500m each. Others include the Oil and Natural Gas Commission (ONGC) \$400m on top of the \$400m it raised by way of Euro-loan last year, and the National Thermal Power Corporation, which last year was involved in a \$344m loan for the Rihand Power station project.

Loans totalling some \$600m may also be sought to help fund six fertiliser plants costing a total of some \$3.5bn on a cross country natural gas pipeline to be built soon.

Alongside the Reserve Bank and Government deliberations on a market-testing fixed rate bond issue, ICICI is also contemplating a fixed rate bond to help either Air India or ONGC funding as well as a general bond of its own in Japan or Europe.

But despite the optimism of the world's bankers, there is no sign of India casting aside its traditional caution and its reputation internationally for prudent management of its foreign exchange position.

The Government is now preparing its seventh five-year plan for 1988-90, and is weighing the country's need for social, infrastructure and industrial development against problems caused by a cutback in the availability of international aid, especially from the International Development Association, the World Bank's soft lending arm.

Both the Finance Ministry and the Reserve Bank stress that they are determined not to switch from concessional aid into a massive increase in commercial borrowing.

The country's debt service ratio, of borrowings to total export earnings, stands at about 14 per cent. Unless there is a marked improvement in exports and import substitution, this is likely to rise to 20 per cent by the end of the decade as India's repayments build up on foreign debts including the \$3.9bn it is taking up from its \$5bn IMF facility.

The Government does not want the ratio to rise much above this figure, and it is preparing yardsticks for monitoring borrowings and debt service ratios covering ten years for key sectors, in particular measuring the export potential of projects requiring foreign borrowings.

India resents the suggestions of the U.S. Government that it should move out of soft loans faster. It argues that to do so could eventually inhibit its

credibility as a commercial borrower, because of the heavy debts that would build up on its long term social and infrastructure projects, which have low initial yields in commercial terms.

It regards this as a serious problem even though 93 per cent of its planned development is met from internal resources. The net inflow of concessional assistance in 1983-84 was about \$1.5bn and India expects to need such amounts for many years.

The country's development problems are increased by a lack of funds to spend on projects. Expansion plans are therefore being pruned for the rest of the decade. The emphasis will be on investments in power, transport, energy and fertilisers, with aid being required from foreign countries supplying equipment and services. In other major sectors, such as steel, the emphasis will be on modernising existing plant which is performing badly rather than on building new large scale works.

Two years ago, the Government asked the Asian Development Bank for \$2bn aid. It is likely to be given only a few hundred million, an initial \$100m line of credit having just been given to the Bombay-based Industrial Credit and Investment Corporation (ICICI), one of the country's major Government controlled financial institutions.

All of these securities having been sold, this announcement appears as a matter of record only.

2,200,000 Shares



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Lehman Brothers Kuhn Loeb  
Incorporated

E. F. Hutton & Company Inc.

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March, 1984

This announcement appears as a matter of record only.

February 1984

**CASIO**  
Casio Computer Co., Ltd.  
(Casio Keisanki Kabushiki Kaisha)  
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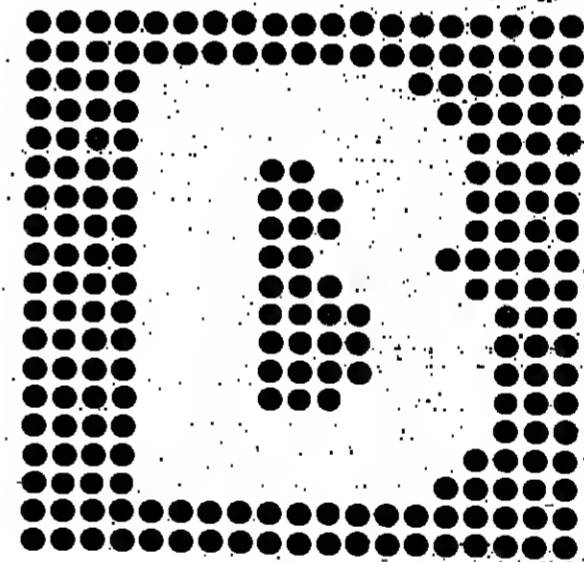
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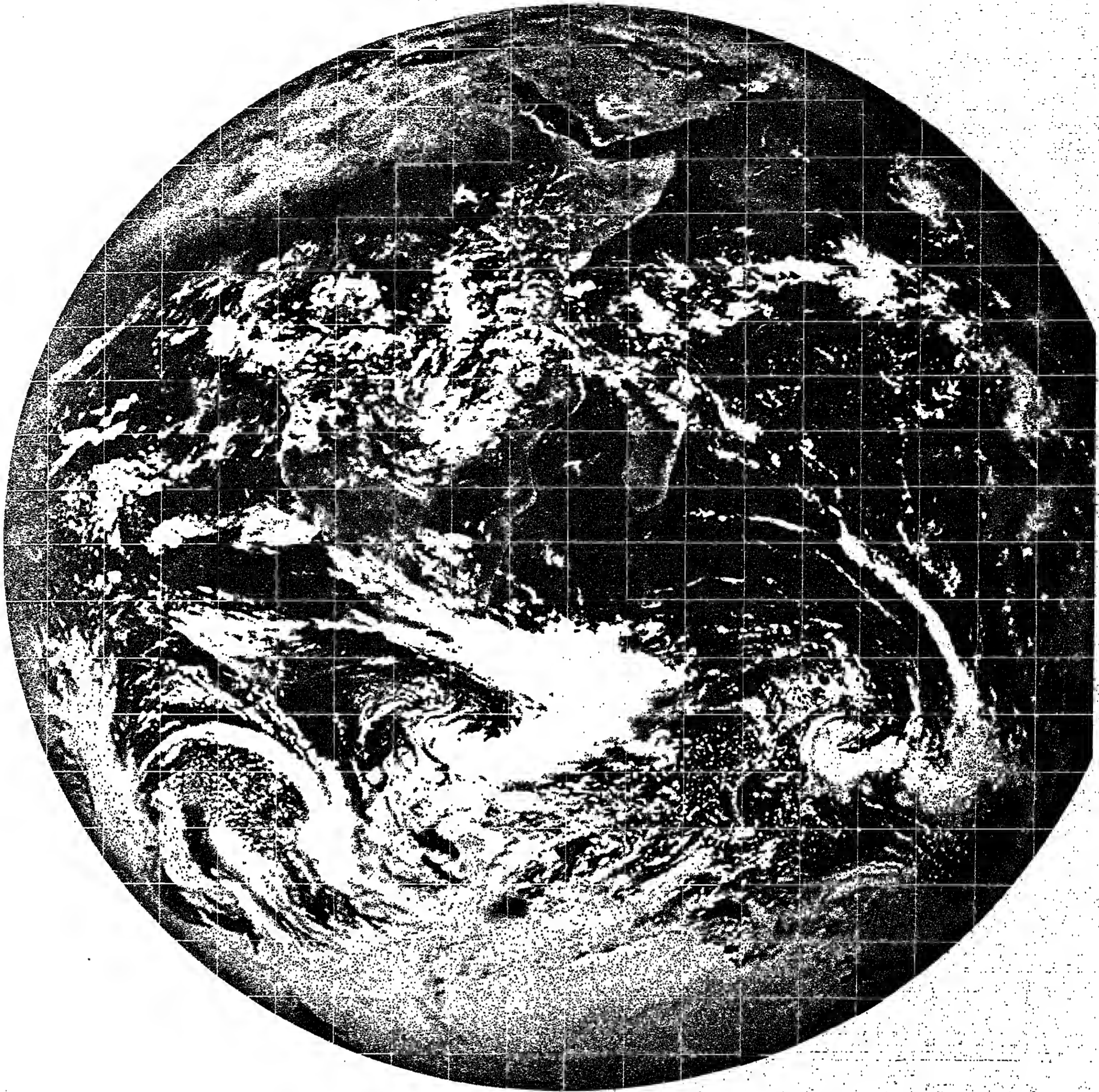
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As one of Europe's major semiconductor manufacturers, Ferranti Electronics attacks the world market, operating in Western Europe, North America, Hong Kong and Taiwan.

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As world leaders in gate array technology, our ULA\* chips deliver cost-effective custom LSI in a matter of weeks.

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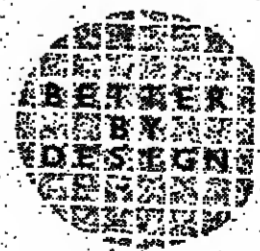
second major production facility, an 85,000 sq-ft. plant which shipped first product only 10 months after the decision to build.

A £10 million investment and clear evidence that we are committed to meeting the voracious demand for our technology.

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\*ULA is a registered trademark of Ferranti plc for semiconductor devices.

Handwritten notes and signatures at the bottom right corner of the page.

UK COMPANY NEWS

Enlarged Riley jumps to record £2.54m on £10m sales increase

PRE-TAX profits of Riley Leisure, the snooker club owner, billiards table maker and keep-fit equipment company, soared to a record £2.54m for 1983. This compares with £1.42m made in the previous 17 months, and was struck on turnover £10m higher at £25m.

Annualised earnings per 10p share are shown 60 per cent ahead at 11.4p and the final dividend is 5.2p for a 4.5p total, against 5.6p for the longer accounting period of 1981-82.

This much improved result reflects the increased size of the group, and the directors say that although income from the snooker table manufacturing and servicing division—which now includes Leisure Industries—did not reach earlier expectations, the business had another good year and Powersport International produced excellent results.

Both these latter two divisions have made a good start to the current year, they add.

A divisional breakdown of turnover and trading profits shows (000s omitted): snooker table manufacturing £1,076 (£7,715) and £1,147 (£8,051); snooker clubs £4,585 (£3,668) and £1,170 (£894); fitness equipment £2,141 (£1,411) and £1,818 (£1,238); furniture (£2,595) and £26 loss (£13 profit); games £937 (£1,165) and £37 loss (£32 profit).

Figures include a full year's results from Leisure Industries and other smaller companies acquired during the 12 months.

The company increased the number of its snooker clubs during the year through new openings and by acquisition, and the results of these clubs are encouraging, the directors state. The company now has 72 clubs operating 968 tables.

They explain that the main reason for the snooker table manufacturing and service division not matching expectations was the popularity of personal computers during the Christmas

Bruntons falls £0.4m but holds dividend

A REDUCTION of £406,000 to £1.1m in pre-tax profits is reported by steel wire maker Bruntons (Muselburgh) for 1983. Shareholders receive a same-again dividend of 10.5p, the second interim being 6.25p.

This time the cash call is linked to the disposal of the last of the machine tools activities, an acquisition and a surprise change in the board. Mr Stewart Jamieson is stepping down as chairman after less than a year and substantially reducing his investment.

Norton also released its half-year figures yesterday showing an increased loss of £412,000 before tax for the six months to September 30, 1983, compared with £255,000. The bulk of the loss is represented by the machine tools activities now being sold for a nominal sum.

The cash call is a hefty one—two rights plus 10 for every preference share in issue, amounting to 44.63m new ordinary shares at 4p each. Before expenses, the issue will raise £1.78m.

In the market Norton's share price eased 3p to 91p, a new low for 1983-84. The shares had been as high as 40p last

W. E. Norton calls for further £1.8m

BY TERRY GARRETT

JUST THIRTEEN months after his last rescue package of rights issue and asset disposal, troubled W. E. Norton is again turning to its shareholders for fresh equity.

This time the cash call is linked to the disposal of the last of the machine tools activities, an acquisition and a surprise change in the board. Mr Stewart Jamieson is stepping down as chairman after less than a year and substantially reducing his investment.

Norton also released its half-year figures yesterday showing an increased loss of £412,000 before tax for the six months to September 30, 1983, compared with £255,000. The bulk of the loss is represented by the machine tools activities now being sold for a nominal sum.

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Copydex pays 5.25p on record £762,000

ON THE back of a £571,000 increase to record pre-tax profits of £762,000, Copydex, manufacturer of adhesives and other DIY products, is hoisting its dividend for 1983 from 3.5p to 5.25p, with a final payment of 3p net.

At mid-term profits were ahead from £37,000 to £263,000 and the directors said the taxable result for the second half would not be less than that for the first. In the event it turned in at £396,000 (£154,000).

They now point out that the company has demonstrated an encouraging growth in sales—£8.45m (£7.2m) for 1983—and profits, although medium-term plans formulated in late 1982 have not yet been fully implemented.

A continuing improvement in performance is therefore predicted but implementation costs may reduce the rate of improvement in the short term.

Demand for the company's products is still increasing, they state, and sales will be further assisted by the introduction of additional products during 1984.

After tax of £349,000 (£42,000), earnings per 10p share for the year under review finished well ahead from 4.59p to 13.54p. There was also an extraordinary debit of £156,000 (£54,000 credit) representing a provision for deferred tax resulting from the 1984 Finance Bill.

Whatlings cash call to finance change of tack

BY TERRY GARRETT

GLASGOW-BASED builder and civil engineer, Whatlings, is asking its shareholders for an extra £777,000 of equity money to help finance its expansion into "self-generated" project work.

According to the chairman, Mr D. Cameron Lindsay, Whatlings has been pushing its efforts towards developing its own projective housing and refurbishing work during the last two to three years in an effort to insulate itself from civil engineering work tied to the Government's spending policies.

The change of emphasis away from the public sector towards its own development has substantially increased Whatlings' working capital requirements. During the year to September 1983 cash of £630,000 at the beginning of the period was turned into net debt of £859,000. By the

Midsummer Inns setback

WITHOUT AN exceptional trading profit was up from £58,000 to £68,000. However, finance costs rose to £14,000 (£1,000) and there is an exceptional charge of £8,000 (credit £55,000).

Tax takes £7,000 (same) leaving the net profit at £37,000 (£136,000—subject to extraordinary debit £22,000). Earnings are 6.4p (25.5p) per share.

Isis rights to raise £3m

Isis Group has completed a rights issue on the basis of one for four to existing institutional and employee shareholders at a price of £1.50 per share.

This is the first major financing by Isis since it departed United Dominions Trust following an institutional backed management buy-out during 1981.

Keep Trust tops £1m and sees continued growth

FURTHER progress has been made by Keep Trust in the second half of 1983, with profits of £849,000. This makes a total of £1.08m for the year, compared with the 1982 loss of £441,000.

Current trading indicates that the group will continue to improve its performance, and that profits for 1984 will exceed those reported, the directors state. They are stepping up the dividend to 0.38p net, against 0.15p.

The company is disposing of Swirco Newton, its merchanting interest in South Wales, and will be left with two main industrial interests. They are the sales and servicing of motor vehicles, which has put in a "satisfactory performance" in the past year, and the leisure division consisting chiefly of Wicksteed Leisure, the playground equipment manufacturer, which has more than doubled its profits for the third time running.

In 1983 group turnover moved up to £56.5m, from £54.8m, and gross profit came to £9.08m (£10.08m). But operating ex-

Over-capacity remained in the wire, wire rope and steel strip sectors and, coupled with a continuing substantial volume of low priced imports, gave rise to severe competition and reduced margins, reports the chairman Mr A. S. Wood.

On prospects for the current year, the chairman says there may be some easement of the over-capacity situation, but the miners' strike is affecting the wire and wire rope divisions since the NCB is the predominant consumer of wire rope in the UK. Therefore, he is unable to forecast the likely results for the first-half of the current year.

Tax took £211,000 (£973,000) for 1983, less overprovision previously £15,000 (£24,000), to leave the net profit at £904,000 (£1,27m). Earnings were 11.3p (15.54p) per share.

Granville & Co. Limited  
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Over-the-Counter Market

1983-84	Company	Price	Gross Yield	P/E	Fully	
High	Low	Change	div.(p)	%	Actual based	
122	120	Ass. Brit. Ind. Ord.	10.0	7.1	7.5	9.8
198	117	Ass. Brit. Ind. Ord.	5.1	9.4	18.6	18.6
62	52	Armasol Group	2.2	2.2	13.1	26.7
38	21	Armasol & Rhodes	2.7	4.8	10.2	11.0
32	14	Bardon Hill	5.0	2.5	4.5	8.3
53	33	Brac. Technologies	15.0	10.0	—	—
200	187	CCL Ordinary	2.0	5.7	1.2	—
152	121	CCL 11pc Conv.	17.8	17.0	—	—
457	103	Chemical Group	8.0	8.7	33.2	53.9
429	100	Cindia Group	—	—	9.8	14.5
63	46	Deborah Services	8.7	4.5	8.2	13.4
195	75	Frank Horsell Pr Ord 87	1.2	14.3	—	—
69	26	Frederick Parker	7.3	15.1	18.5	18.9
39	32	Georg. Precision Castings	10.4	7.0	—	—
2150	2150	Isla New Fully Pd Ord	17.1	4.7	—	—
118	118	Isla Com. Pr Ord	4.5	3.8	8.2	12.0
114	114	Jackon Group	4.0	1.1	28.2	34.4
247	189	James Burroughs	20.0	19.2	12.1	8.1
378	275	Minihoups Holdings	5.7	8.3	7.1	—
108	108	Robert Rankins	2.3	4.7	—	—
74	59	Scruttons	1.0	—	8.9	8.2
120	61	Terday & Holdings	11.8	11.8	11.8	11.8
44	17	Unilock Holdings	8.0	8.1	7.4	9.8
64	64	Walter Alexander	18.0	17.1	7.0	8.8
92	65	W. S. Yates	24.3	—	—	—
276	236	W. S. Yates	17.1	7.0	8.8	7.9

LAST YEAR  
1 1/2 MILLION  
PEOPLE  
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WITH  
LADBROKE.

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There are now 35 Ladbroke hotels, situated in key cities and important tourist centres throughout the UK. And with 21 villages, Ladbroke is one of the giants of the UK holiday industry.

Hotels and Holidays form a major division of Ladbroke.

They contributed £11.6m profit in 1983. Total Group pre-tax profit for 1983 subject to final audit and before allocation to the employee share scheme was £42.4m.

Ladbroke is one of Britain's top 100 and Europe's top 200 companies.

There's more to Ladbroke than people think.

**Ladbroke Group PLC**  
Hotels · Property · Leisure · Retailing

BIDS AND DEALS

Avana faces new obstacle as Swedish group moves in

Avana Group's unwelcome \$18m bid for Basset Foods has run into a new obstacle. Cloetta, a privately-owned Swedish confectionery group...

BOARD MEETINGS

Table listing board meetings for various companies including Alliance and London Insurance, Japan Assets Trust, and others.

Irish Govt. blocks bid for building society

THE IRISH Government has moved to block a £7m (£5.7m) bid by the Bank of Ireland for the Irish Civil Service Building Society...

Hanson Trust bid for U.S. Industries

Redressing cross Atlantic balance

BY RAY MAUGHAN IN LONDON AND PAUL TAYLOR IN NEW YORK

friendly response from Goldman Sachs (the investment bank which is now advising the independent board members) and two directors who seemed pleased to have an opportunity to look at anything which will improve the shareholders' position...

to get earnings back to and beyond their peak of \$52.1m five years ago, management has focused on the industrial, construction and consumer markets where the group is either a major competitor or holds a specialist market position...

Booker U.S. expansion with £6.9m purchase

Booker McConnell, the international agriculture, food and health products group, is paying U.S.\$10m (£6.2m) for Radiance, a subsidiary of the U.S. consumer goods company Iroquois Brands...

Wellington makes £4.2m bid for Weber Holdings

A £4.2m bid for Weber Holdings, an investment and property company, has been launched by Wellington, a Manchester-based private property investment company...

CU links to launch new life and pension fund

THE UK life assurance division of Commercial Union Assurance Company has linked up with stockbrokers James Capel to launch a new life and pension fund linked to the 10 top performing trusts...

MINING NEWS Gencor's ingenious fund-raising plan

South Africa's General Mining Union Corporation (Gencor) is announcing further details of its proposed R400m (£224.3m) rights issue of compulsorily convertible preference shares...

KIO Norfolk stake

The Knauff Investment Office has lifted its stake in Norfolk Capital Group, the hotel chain, to 13.1 per cent with the purchase of 1m shares at 61p each...

FT FINANCIAL TIMES CONFERENCES European Banking Conference Milan: 11 & 12 April, 1984. The major Financial Times Banking Conference on the Continent in 1984 will be held in Milan on 11 and 12 April under the Chairmanship of: On Beniamino Andreatta, Former Minister of the Treasury, Chairman, AREL...

Sidlaw in £5m purchase

Sidlaw, the oil services and supplies group, has bought a 50 per cent shareholding in Drexel Oilfield Services, a multinational group of oilfield equipment manufacturing and service companies...

Moves at Palmerston Tst.

MEMBERS of the Goldberg family have urged shareholders of Palmerston Investment Trust to appoint Mr Norbert Goldberg as a director of the company...

Hemerdon is refused planning permission

PLANNING PERMISSION for the development of tungsten and tin deposits at Hemerdon Hill in Devon was refused yesterday by the Department of the Environment...

BIDS AND DEALS IN BRIEF

F. H. Lloyd Holdings has sold its subsidiary M. and W. Grazebrook to a consortium led by Trans Freight, which has been acquired by the Eden Group...

Nokia placing brings in £12m

Enskilda Securities and brokers Cazenove have arranged a share placing of 19.5 per cent of the free capital of Nokia, raising £12m from institutional investors...

Guinness Mahon Distributor Fund Limited. Share Capital Issued and fully paid \$9,909. Introduction of up to 2,000,000 Participating Redeemable Preference Shares of 1 cent each.



# NEW YORK STOCK EXCHANGE COMPOSITE PRICES

Prices at 3pm April 3

12 Month High	Low	Stock	Dr.	Yr.	P	St	12 Month High	Low	Stock	Dr.	Yr.	P	St	12 Month High	Low	Stock	Dr.	Yr.	P	St
120	110	AA	+	10	10	10	120	110	AA	+	10	10	10	120	110	AA	+	10	10	10
110	100	ABC	-	5	5	5	110	100	ABC	-	5	5	5	110	100	ABC	-	5	5	5
100	90	DEF	+	15	15	15	100	90	DEF	+	15	15	15	100	90	DEF	+	15	15	15
90	80	GHI	-	10	10	10	90	80	GHI	-	10	10	10	90	80	GHI	-	10	10	10
80	70	JKL	+	20	20	20	80	70	JKL	+	20	20	20	80	70	JKL	+	20	20	20
70	60	MNO	-	5	5	5	70	60	MNO	-	5	5	5	70	60	MNO	-	5	5	5
60	50	PQR	+	10	10	10	60	50	PQR	+	10	10	10	60	50	PQR	+	10	10	10
50	40	STU	-	15	15	15	50	40	STU	-	15	15	15	50	40	STU	-	15	15	15
40	30	VWX	+	20	20	20	40	30	VWX	+	20	20	20	40	30	VWX	+	20	20	20
30	20	YZA	-	5	5	5	30	20	YZA	-	5	5	5	30	20	YZA	-	5	5	5
20	10	BCD	+	10	10	10	20	10	BCD	+	10	10	10	20	10	BCD	+	10	10	10
10	5	EFG	-	15	15	15	10	5	EFG	-	15	15	15	10	5	EFG	-	15	15	15
5	0	HIJ	+	20	20	20	5	0	HIJ	+	20	20	20	5	0	HIJ	+	20	20	20

Closing U.S. share prices were not available for today's edition because of industrial action at the Financial Times printers in Frankfurt.

Continued on Page 31

*April 1984*

*100*

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AMERICAN STOCK EXCHANGE COMPOSITE PRICES

Prices at 3pm, April 3

Main table of American Stock Exchange Composite Prices, listing various stocks with columns for 12 Month High/Low, Stock Name, Div. Yld., P/E, and 100s High/Low.

Continued on Page 32

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

Main table of New York Stock Exchange Composite Prices, listing various stocks with columns for 12 Month High/Low, Stock Name, Div. Yld., P/E, and 100s High/Low.

Notes explaining the data, including 'Sales figures are unofficial' and 'Dividend data are annual disbursements based on the latest declaration'.

WORLD VALUE OF THE DOLLAR every Friday in the Financial Times

WORLD STOCK MARKETS

Nasdaq national market, 2.30pm prices

Table of world stock markets including Germany, Norway, Australia, Japan, and various regional indices like the Toronto 300 and American Stock Exchange Prices.

OVER-THE-COUNTER

Large table of over-the-counter stock prices, organized by market section (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) and including a LONDON section with Chief price changes.

Table of American Stock Exchange Prices, listing various stocks and their performance metrics.

NEW YORK STOCK EXCHANGE

Table of New York Stock Exchange indices and market data.

Indices

Table of various market indices and their values.

AMERICAN STOCK EXCHANGE PRICES

Large table of American Stock Exchange prices, listing individual stocks and their prices.

World Economic Indicators every Monday in the Financial Times

Handwritten signature 'Jeff' and other scribbles at the bottom right of the page.



MARKET REPORT

U.S. interest rate anxieties undermine sentiment Equity index falls 11.6 to 859.2

Account Dealing Dates
Opinion
First Declared Last Account
Dealing Date Dealing Day
Mar 26 Apr 5 Apr 6 Apr 16
Apr 9 Apr 26 Apr 27 May 1
Apr 30 May 10 May 11 May 21

Account Dealing Dates
Opinion
First Declared Last Account
Dealing Date Dealing Day
Mar 26 Apr 5 Apr 6 Apr 16
Apr 9 Apr 26 Apr 27 May 1
Apr 30 May 10 May 11 May 21

FINANCIAL TIMES STOCK INDICES
Table with columns: Index, April 3, April 4, March 29, March 28, March 27, Year ago

HIGHS AND LOWS S.E. ACTIVITY
Table with columns: Index, High, Low, Daily, S.E. Activity

Flex followed a rise of 8 to 10 1/2 in response to the good preliminary results. UBS up 1 1/2 to 18 1/2. Also moved against the trend following an investment seminar. Automated Security, in contrast, failed to benefit from acquisition news and gave up 10 to 13 1/2. Pressac, a recent favourite, met with renewed selling and reacted 10 to 23 1/2. While Logica gave up 6 at 37 1/2, Falls of 6 were marked against Eurotherm, 250p, and United Scientific, 290p.

while the increased half-year profits left TSW-Television South West a fraction dearer at 37p. Aspinall Holdings remained on offer and shed 5 more to 123p. Movements in Motore were largely confined to the Garage sector. British Cap Auctions eased 3 to 112p and Lex Service 5 more to 45p, but Glasfield Lawrence, in ex-rights form, closed 4 dearer at 40p with the new half-paid shares at 16p premium. Comment on the excellent results and proposed 100 per cent scrip-issue helped Bunzi rise 30 more for a two-day advance of 53 to 489p. Elsewhere Paper Printings, Egyptus gained 4 to 35 1/2 as did Michael Peters, to 17 1/2. British Printing, on the other hand, gave up 4 at 83p. Associated Book Publishers rose 2 to 30 1/2 awaiting today's annual figures. Properties encountered tepid response, but falls among the leaders were usually confined to a couple of pence. A full market usually Telfair gave up 1 1/2 to 29 1/2. Home Video not to renew its offer, P & O Deferred cheapened 2 further to 28p. Falls were in the majority among utilities. Harold Paper declined 30 to 300p and Atkins Brothers 3 to 84p. Robert H. Lowe, at 45p, gave back 3 of the previous day's speculative rise of 10. Small cap Tidians gained 3 more to 33p in a restricted market. Far East orientated investment trusts gave ground and falls of 8 and 10 respectively were seen in Dravon Japan, 388p, and Baillie Gifford Japan, 280p. Fleming Japanese dipped 7 to 50p and GT Japan fell 6 to 188p. Financial Trusts had Mills and Allen 10 off to 31 1/2 and Merentille House 5 off 25p to 40p. Stockjobbers Smith Brothers came on offer at 91p, 20p.

do Metal Exchange encouraged widespread selling of Financials, both South African and London-based. In the former sector, AngloGold lost 2 to 53 1/2, Gold Fields of South Africa a half-point to 115 and Middle Wits a like amount to 111. Goner eased 1 to 115 in front of further details of the proposed R400m rights issue. Do Beers eased 5 to 500p mainly on lack of interest. London Financials were unsettled by the downturn in UK equities. Gold Fields dropped 12 to 607p and RTZ, due to report preliminary results on April 11, fell 11 to 677p. Hampton Assets gave up 5 to 24 1/2, but Charter held steady at 250p. Australians showed numerous weak spots, reflecting the poor overnight performance on Wall Street. Among the leaders Peko-Wallendrop dropped 10 to 340p and Western Mining 5 to 270p. Golds were lower across the board. Recent favourite Empress Mines gave up 15 at 260p while GMK eased 5 to 730p and North Kalgurlie 2 to 75p. Poseidon fell 7 to 320p. Losses of a couple of pence were frequent throughout the list of speculative issues. Demand for Traded Options contracted with 3,911 deals completed compared with Monday's total of 4,505. Nevertheless, a considerable interest was again shown in Commercial Union's positions with 1,175 calls and 583 puts being traded as the market continued to anticipate a statement regarding the sale of its U.S. interests.

OVER-THE-COUNTER

Continued from Page 32
Table with columns: Stock, Sales, High, Low, Last, Day, Stock, Sales, High, Low, Last, Day

FT-ACTUARIES SHARE INDICES

These indices are the joint compilation of the Financial Times, the Institute of Actuaries and the Faculty of Actuaries

Table with columns: Index, Tues April 3 1984, Mon Apr 2, Fri Apr 27, Wed Apr 25, Year ago (approx)

FIXED INTEREST

Table with columns: PRICE INDICES, Year, Day's change, Apr 3, Apr 2, 1st half, 1984 to date

Bowater react afresh

Bowater encountered further profit-taking and reacted 9 more to 311p. Occasional selling and lack of support saw other leading Miscellaneous Industrials drift lower again. BTR, 465p, and Gmax, 815p, reacted 3 1/2 and 4 1/2 respectively, while Beecham eased 4 to 368p and Beets a couple of pence to 151p. Elsewhere, Weber Holdings provided one of the few firm spots with a rise of 3 1/2 to 101 on the high approach from Wellington. Hartons were also noteworthy for a rise of 4 1/2 to 46 1/2 in response to the results, proposed one-for-one scrip issue and encouraging statement on outlook. Bruntons (Musselburgh) hardened a couple of pence to 128p following the preliminary figures. Charles International, a good market of late, ran back 6 to 368p, following the annual results, while Copeyde fell 10 to 160p despite the increased dividend and annual profit. Fees Holdings eased 2 to 29p and Pritchard Services 1 1/2 to 130p, both following trading statements. Sporadic selling left Eastern Chalmers 1 1/2 dearer at 24 1/2, while Gesteimer "A" a recent bid favourite, reacted a like amount to 90p. Other noteworthy losses included Bestwood 10 down to 259p, 32p. Henworth Ceramic, 9 lower at 162p.

Against Leisure issues, demand in restricted markets, lifted Scotiabank

Scotiabank rose 1 1/2 to 240p and Photax (London) 6 to 60p. Ripley Leasing gained the turn to 123p following the preliminary results, while the increased half-year profits left TSW-Television South West a fraction dearer at 37p.

Leisure issues, demand in restricted markets, lifted Scotiabank

Leisure issues, demand in restricted markets, lifted Scotiabank. Scotiabank rose 1 1/2 to 240p and Photax (London) 6 to 60p. Ripley Leasing gained the turn to 123p following the preliminary results, while the increased half-year profits left TSW-Television South West a fraction dearer at 37p.

Opening levity in London

Opening levity in London well below Monday's closes and subsequent small but persistent dips, selling produced widespread and often substantial losses throughout the list of Golds. Business contracted in the afternoon but there was little sign of any significant recovery. The Gold Mines index showed a 12 1/2 decline to 638.7. Bullion closed a net \$2.5 off at \$361.25 an ounce. Heavyweights were especially vulnerable, losses in the region of a point being common to Harbun Deep, 230, Winkolbank, 235, Hartbees, 237, Kilm, 235, and St. Helena, 237. The weak trend in golds coupled with a general retreat by base-metal prices on the Lon-

EUROPEAN OPTIONS EXCHANGE

Table with columns: Series, Vol., Last, Vol., Last, Vol., Last, Stock

LONDON TRADED OPTIONS

Table with columns: Option, Apr, July, Oct, Apr, July, Oct

RISES AND FALLS YESTERDAY

British Funds, Rises, Falls, Some

Table with columns: British Funds, Rises, Falls, Some

FT-SE 100 INDEX

Closes, High, Day's low, (Base value = 1000 December 30 1983)

Table with columns: Closes, High, Day's low

LONDON TRADED OPTIONS

Table with columns: Option, May, Aug, Nov, May, Aug, Nov

FT LONDON SHARE INFORMATION SERVICE

2 Day Management Training Programmes - Time Manager Stress Manager

time manager international logo and contact info

BRITISH FUNDS

Table of British Funds with columns for Name, Price, and % Change

Table of Five to Fifteen Years funds with columns for Name, Price, and % Change

Table of Over Fifteen Years funds with columns for Name, Price, and % Change

Table of Undated funds with columns for Name, Price, and % Change

Table of Index-Linked funds with columns for Name, Price, and % Change

Table of INT. BANK AND O'SEAS GOVT STERLING ISSUES

Table of CORPORATION LOANS

Table of COMMONWEALTH AND AFRICAN LDANS

Table of LOANS Building Societies

Table of Public Board and Ind. Financial

Table of FOREIGN BONDS & RAILS

AMERICANS

Table of American stocks with columns for Name, Price, and % Change

BUILDING INDUSTRY, TIMBER AND ROADS

Table of Building Industry, Timber and Roads stocks with columns for Name, Price, and % Change

DRAPERY & STORES—Cont.

Table of Drapery & Stores stocks with columns for Name, Price, and % Change

ENGINEERING—Continued

Table of Engineering stocks with columns for Name, Price, and % Change

INDUSTRIALS (Miscel.)

Table of Industrial (Miscellaneous) stocks with columns for Name, Price, and % Change

CANADIANS

Table of Canadian stocks with columns for Name, Price, and % Change

BANKS, H.P. AND LEASING

Table of Banks, H.P. and Leasing stocks with columns for Name, Price, and % Change

ELECTRICALS

Table of Electrical stocks with columns for Name, Price, and % Change

FOOD, GROCERIES, ETC

Table of Food, Groceries, etc. stocks with columns for Name, Price, and % Change

HOTELS AND CATERERS

Table of Hotels and Caterers stocks with columns for Name, Price, and % Change

CHEMICALS, PLASTICS

Table of Chemicals, Plastics stocks with columns for Name, Price, and % Change

DRAPERY AND STORES

Table of Drapery and Stores stocks with columns for Name, Price, and % Change

ENGINEERING

Table of Engineering stocks with columns for Name, Price, and % Change

BEERS, WINES AND SPIRITS

Table of Beers, Wines and Spirits stocks with columns for Name, Price, and % Change

HOTELS AND CATERERS

Table of Hotels and Caterers stocks with columns for Name, Price, and % Change

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Financial Times Wednesday April 4 1984

INDUSTRIALS—Continued

Table of industrial stocks including companies like ICI, BP, and various engineering firms, with columns for stock price, high, low, and volume.

LEISURE—Continued

Table of leisure and entertainment stocks including companies like British Airways, British Telecom, and various media companies.

PROPERTY—Continued

Table of property and real estate related stocks including various real estate investment trusts and companies.

INVESTMENT TRUSTS—Cont.

Table of investment trusts including various funds and trusts offering different asset classes.

OIL AND GAS—Continued

Table of oil and gas related stocks including major oil companies and energy producers.

DAWA SECURITIES logo and branding for International Finance.

MINES—Continued

Table of mining stocks including various metal and coal mining companies.

NOTES

Notes section providing information about interest rates, exchange rates, and other financial data.

REGIONAL AND IRISH STOCKS

Table of regional and Irish stocks including companies from various countries.

OPTIONS

Table of options contracts including call and put options for various stocks.

Additional notes and information regarding the options and regional stocks.

INSURANCE

Table of insurance stocks including various insurance companies.

PROPERTY

Table of property stocks including real estate and construction related companies.

FINANCE, LAND, ETC

Table of finance, land, and other related stocks including banks and financial institutions.

TRUSTS, FINANCE, LAND

Table of trusts, finance, and land related stocks including various investment vehicles.

OIL AND GAS

Table of oil and gas stocks including energy and resource companies.

LEISURE

Table of leisure stocks including entertainment and media companies.

PROPERTY

Table of property stocks including real estate and construction companies.

FINANCE, LAND, ETC

Table of finance, land, and other related stocks including financial institutions.

TRUSTS, FINANCE, LAND

Table of trusts, finance, and land related stocks including investment trusts.

OIL AND GAS

Table of oil and gas stocks including energy and resource companies.

AUTHORIZED UNIT TRUSTS

Table listing authorized unit trusts with columns for trust name, manager, and contact information.

Table listing various unit trusts and their performance metrics, including names like 'British Unit Trust Services Ltd' and 'Barclays Unit Trust Managers Ltd'.

FT UNIT TRUST INFORMATION SERVICE

Table listing unit trusts with columns for name, manager, and performance data.

Table listing unit trusts with columns for name, manager, and performance data.

Table listing unit trusts with columns for name, manager, and performance data.

Table listing unit trusts with columns for name, manager, and performance data.

Insurances - continued

Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.

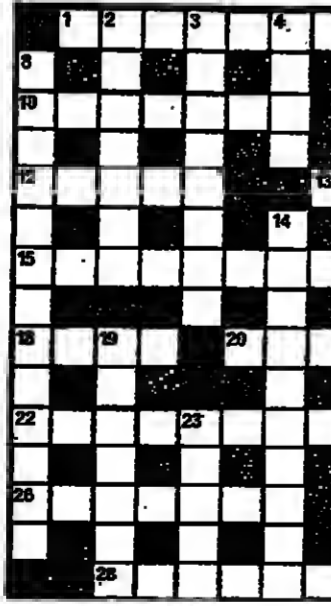
Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.

F.T. CROSSWORD PUZZLE No. 5384

- ACROSS
1 Getting into deep water? (7, 5)
10 They have the edge in rural gatherings (7)
11 She's seen in action at a Shakespeare festival (7)
12 Examination necessitating a lot of book-work (5)
13 Members of this society have a lot in common (8)
15 It's put in by an attendant (10)
16 Snake for backing a mount (4)
18 Love-bird (4)
19 Impracticable, perhaps, in italics form (10)
22 Part of the factory where no work is done (4, 4)
24 Row to the right ship (5)
26 Employment of paper folders (7)
27 I'm old fashioned, there's no getting away from it (7)
28 The case for a two-day visit? (9, 3)



Solution to Puzzle No. 5383



Table listing insurance companies and their services.

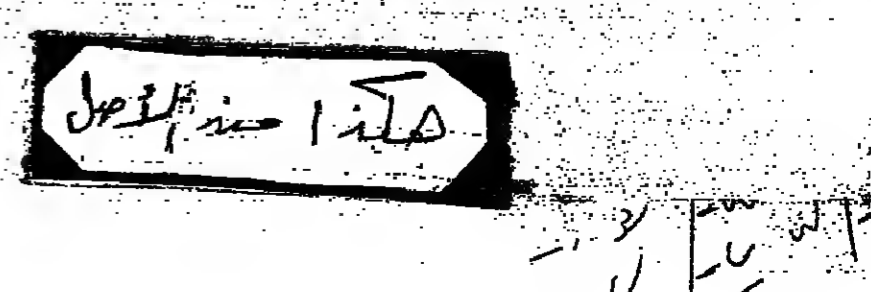
Table listing insurance companies and their services.

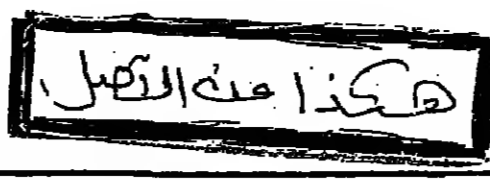
Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.

Table listing insurance companies and their services.





INSURANCE & OVERSEAS MANAGED FUNDS

Table of insurance and managed funds, including sections for Barclays Life Assurance, British National Life Assurance, Canadian Life Group, and various international funds.

Table of insurance and managed funds, including sections for Lloyds Life Assurance, Property Group Assurance, Standard Life Assurance, and various international funds.

Table of insurance and managed funds, including sections for Bank of America International, Barchys Unicorn International, and various international funds.

Table of insurance and managed funds, including sections for Richmond Life Assurance, Royal Bank of Canada Funds, and various international funds.

OFFSHORE AND OVERSEAS

Table listing offshore and overseas managed funds, including sections for Adia Investment, Vanguard Life Assurance, and various international funds.

Notes and disclaimers at the bottom right of the page, including information about fund performance and currency conversions.

COMMODITIES AND AGRICULTURE

Coffee price inquiry shows no irregularity

By Richard Mooney

A SPECIAL investigation of last Friday's dramatic rise in the spot price on the London Robusta coffee futures market showed that there had been no breach of the rules...

On Friday in the last 10 minutes of trading before the March delivery position expired, the price rocketed from £2,250 to £3,000 a tonne as one trader desperately tried to cover a "short" sale position by making a matching purchase...

The matter was brought to the committee's attention after the close of trading but it said yesterday it could find no evidence of any irregularity...

Farmers welcome higher beef subsidies

BY RICHARD MOONEY

FOLLOWING THE prescription of some extremely bitter pills from Brussels, British farmers have at last found something to smile about.

News that the Government had decided to pay an increased subsidy on beef cattle and to raise the guaranteed price for wool was described yesterday as "most welcome" by Mr Joe Raine, chairman of the National Farmers' Union's livestock and wool committee.

The suckler cow subsidy is animal and the wool guarantee has been doubled to £24.74 per acre and the wool guarantee goes up to £120p a kilo bawling stood still for four years.

"We have been pressing the Minister for action to soften the blow of Common Market decisions on cattle and sheep and we appreciate what he has done," said Mr Raine. "The union has welcomed that

the beef industry, already at a very low ebb, cannot stand any additional price pressure. Either from a weakening of support for the knock-on effect of higher slaughterings from the milk herd.

"In these circumstances the doubling of the suckler cow premium has been desperately needed."

He said the higher wool guarantee was "a much needed shot in the arm" for producers. Meanwhile, the EEC farm price and reform package came in for further criticism, this time from Welsh farmers, who are angry at the special treatment given to the Irish dairy sector.

While farmers in most other Common Market countries are being forced to cut back milk production, the Irish are being allowed to increase theirs by

more than 4.5 per cent in recognition of the importance of the Irish dairy industry.

"The milk industry is just as important to Wales," said Mr Myrddin Evans, president of the Farmers' Union of Wales. "It represents by far the highest share of Welsh farming's GNP—the dairy industry is the cornerstone of Welsh farming."

He said Mr Jopling, the farming minister, had broken a categorical assurance that British farmers would not be treated differently from those of other member nations.

Mr John Block, the U.K. Agriculture Secretary, said the European Community will probably not be able to compensate the U.S. adequately for proposed restrictions on imports of corn gluten feed, Reuter reports.

"Given the sensitivity of this item in our agricultural trade, we are not optimistic that the EEC will be able to adequately compensate us for this action against our exports," Mr Block said in a statement.

He was responding to reports that the community will seek to negotiate import restrictions under the General Agreement on Tariffs and Trade (GATT). Mr Block said that "such a course of action is pure protectionism and we are disappointed that the EEC has apparently decided to continue to pursue its plans to restrict its imports of these products."

He said the U.S. will meet the EEC, as it is obliged to do under GATT, but at the same time will continue efforts to persuade the members not to follow through on the action.

"The EEC has made it clear that this decision on their part is politically motivated, since they have failed to demonstrate any sound economic justification for restricting imports of corn gluten feed," he said.

The U.S. also questions the consistency under GATT obligations of an EEC permanent minimum import price on raisins.

The U.S. National Corn Growers Association will call for prompt, strong retaliation if the European Community sets limits on imports of corn gluten feed, said Michael Horn, an association spokesman.

"We will push for the Administration to give concrete action to all it has said for the past two years with immediate and strong retaliation," Mr Hall said.

Renewed rise for cocoa 'inevitable'

A RENEWED rise in cocoa prices seems inevitable in view of an expected decline in world stocks, according to London analysts.

The company is predicting a 1983-84 production deficit of 90,000 tonnes which would take the world stocks total down to 450,000 tonnes. But usable stocks would be still lower because of the poor quality and small size of West African beans this year, London analysts said.

The physical market has shown signs of firming recently with Brazil reducing discounts for current crop cocoa from 850-90 against the New York futures price to around \$20 a tonne.

London dealers believe the price rise reflects the continuing uncertainty about the size of Brazil's temporary crop. Recent forecasts have ranged between 2.8m and 1.7m bags, the lower figure emanating from Brazil's Cocoa Farm Recovery Plan Commission (Cepac).

"Previous prospects have not been helped by recent hot, dry, sunny weather, with only occasional rainfall."

"THE AVERAGE price of vacant possession farmland sold in England in the first quarter of the February quarter rose sharply to a new record level, according to figures published yesterday by the Ministry of Agriculture."

At £4,685 a hectare the average fell 175 from the November/January quarter. The weighted average, which allows for regional and size variations in the sample, was also up at £4,733 a hectare, but remained below the £5,000 mark which was reached in the final quarter of last year.

ALCOA is to operate two Taiwan Aluminium Company flat-rolled aluminium products plants and one smelter.

Record cotton output likely

WASHINGTON—Global cotton output is expected to rise to record levels in the 1984-85 (Aug-Sept) season, with 1983-84 prospects mostly unchanged at 67.3m 480-lb bales, the International Cotton Advisory Committee said.

Without specifically forecasting 1984-85 output, the committee said in its monthly report that the largest increase will be in the U.S., where the payment-in-kind programme will no longer be in effect and harvested acreage will recover substantially.

The report also forecast a rebound in Pakistan and in northern India's cotton output, as weather will probably be more normal.

Overall, cotton producers in many nations are expected to boost acreage for 1984-85 in response to favourable prices, the report said.

The report forecast 1984-85 cotton output for the U.S. at 11.5m bales up from 7.7m bales in 1983-84, due to an acreage increase and a recovery in yields from last year's drought.

Commenting on world cotton output in 1983-84, the report said increases in China, Soviet Union, Argentina, Australia, Mexico, Colombia, Paraguay, Greece, Turkey and Syria are expected to be largely offset by declines in the U.S., Pakistan, Brazil, India, Egypt, Spain and El Salvador.

The report said China accounts for most of the gain, with notable increases also indicated for the U.S., India and Turkey. Reuter

Gloomy prospects for Bolivian tin group

COMIBOL, the Bolivian State mining organisation, is leasing about \$50 on each tonne of refined tin it markets, and expects a 1984 deficit of \$150m (£100m). Senior officials in the organisation blame the low price of tin and deteriorating equipment in the mines. Comibol and private mining companies here are also troubled by increasing, large-scale thefts of refined tin from the country, our correspondent reports from La Paz.

One piece of good news for Comibol over the weekend was the Government's decision to release for sale 2,000 tonnes of lead and silver concentrates. This amount represents the surplus production of these materials during August-December last year. The sale will help alleviate Comibol's severe cash-flow problems.

In 1983, Comibol lost an average of \$3.67 on each tonne of tin marketed. (Production cost was \$9.96, the price secured \$5.28, on average). But the Bolivian peso having declined

sharply against the dollar in the first quarter of this year, the organisation's loss in real terms is greater now than last year.

Sr Victor Lopez, vice-president of Comibol, included the words "lack of water, electricity and spare parts; low quality of ores; financial credits set aside but not made available."

There were troubles in transporting metals from the mines, not least because a batch of locomotives from Romania had not arrived. Nor had 16 locomotives ordered from the U.S. because of the delay in obtaining financial credit.

Bolivia, in arrears on servicing its foreign debt, is having great difficulty securing credit for foreign trade.

Comibol also has exchange rate problems. For every dollar the organisation earns abroad, it receives the International Tin Council.

from the Treasury here only 500 pesos—the official rate—whereas Comibol has to find about 2,000 pesos (the parallel market rate) to buy a dollar with which to purchase equipment abroad.

The enterprise was also losing heavily through the rising cost of food here, because it pays part of its miners' wages in foodstuffs, Sr Lopez added.

Meanwhile, the entire Bolivian tin industry is suffering from a spate of thefts of the metal. These thieves, are costing companies in the Huancani district, the main centre for theft, \$1m a month.

Over the weekend Comibol's security department announced the discovery of 30 tonnes of tin worth about \$250,000, in a bank vault at Potosi, apparently stolen from Huancani.

The thieves are notably better equipped, as to transport and communications, than the police, mining companies complain.

Sugar market despondent at beet forecasts

By John Edwards, Commodities Editor

FORECASTS of a significant rise in EEC production are deepening the air of gloom over the London sugar market yesterday.

In Paris, the French Sugar Market Intervention Board in its monthly report predicted that European Community sugar output would increase by 1.6 per cent in 1984-85 to 12.1m tonnes compared with 11.01m in 1983-84.

Meanwhile, in London, sugar dealers E. D. and F. Man, in their latest market report, said there was likely to be a "significant increase in EEC production this season."

The report added that with southern hemisphere crops set to return towards 1983-84, after the setbacks suffered in 1983-84, the outlook was particularly depressing.

AMERICAN MARKETS

Table with columns: Month, Year, Close, High, Low, Prev. Includes sections for NEW YORK, SUGAR, and COFFEE.

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PRICE CHANGES

Table with columns: Commodity, Price, Change. Includes Metals, Tin, and Zinc.

BRITISH COMMODITY PRICES

Table with columns: Commodity, Price, Change. Includes BASE-METALS, COPPER, SILVER, TIN, and LEAD.

WEEKLY METALS

Table with columns: Commodity, Price, Change. Includes COPPER, SILVER, TIN, and LEAD.

AMERICAN MARKETS

Table with columns: Commodity, Price, Change. Includes SUGAR, COFFEE, and NEW YORK.

LONDON OIL

Table with columns: Month, Year, Close, High, Low, Prev. Includes Crude Oil and Spot Prices.

CRUDE OIL FUTURES

Table with columns: Month, Year, Close, High, Low, Prev. Includes Crude Oil Futures.

GAS OIL FUTURES

Table with columns: Month, Year, Close, High, Low, Prev. Includes Gas Oil Futures.

CHICAGO

Table with columns: Month, Year, Close, High, Low, Prev. Includes Live Cattle and Live Hogs.

SPOT PRICES

Table with columns: Commodity, Price, Change. Includes Crude Oil, Gas Oil, and Premium Gasoline.

CRUDE OIL—FOB 15°

Table with columns: Commodity, Price, Change. Includes Arabian Light, Arabian Heavy, North Sea Brent, and African Bonny.

PRODUCTION—North West Europe

Table with columns: Commodity, Price, Change. Includes Premium Gasoline, Gas Oil, and Heavy Fuel Oil.

FINANCIAL TIMES

Table with columns: Date, Price, Change. Includes Financial Times Index and Dow Jones.

GOLD MARKETS

Table with columns: Commodity, Price, Change. Includes Gold Bullion and Gold Bars.

LONDON FUTURES

Table with columns: Commodity, Price, Change. Includes Aluminium, Nickel, and Zinc.

ALUMINIUM

Table with columns: Commodity, Price, Change. Includes Aluminium.

COTTON

Table with columns: Commodity, Price, Change. Includes Cotton.

EUROPEAN MARKETS

Table with columns: Commodity, Price, Change. Includes Wheat, Soft Red Winter Wheat, and Northern Spring 14 per cent protein.

WHEAT

Table with columns: Commodity, Price, Change. Includes Wheat, Soft Red Winter Wheat, and Northern Spring 14 per cent protein.

SOYBEAN MEAL

Table with columns: Commodity, Price, Change. Includes Soybean Meal.

WOL FUTURES

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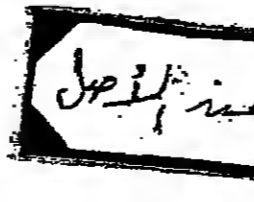
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# CURRENCIES, MONEY and CAPITAL MARKETS

## FOREIGN EXCHANGES

### \$ falters after strong start

The dollar finished below its level of the day in currency markets yesterday but still showed small gains over Monday's closing levels in London. Early trading pushed the dollar interest rate to a new firm resistance, having broken through the DM 2.62 level and fell back in the absence of any follow through.

The current level of U.S. Federal funds rate was certainly a factor underpinning the dollar but there were fears that some level reduction and some end of quarter distortions and the French short-term liquidity problems and did not necessarily herald a sharp upward shift in U.S. interest rates.

The dollar closed at DM 2.6100 from DM 2.6000 and SwFr 2.1510 compared with SwFr 2.1540. Against the yen it finished at ¥224.70 from ¥224.60 and FF 5.2050 from FF 5.2000. On the London market the dollar index rose to 128.9 from 128.1.

**STERLING** — Trading range against the dollar in 1984 is 1.6245 to 1.6385. March average 1.6354. Trade weighted index 79.7 from 79.5, having stood at 79.7 at noon and 79.5 in the morning and compared with 82.9 six months ago.

Sterling remained on the sidelines for much of the day. It showed little overall change against European currencies and its weaker index reflected a fall against the dollar. It finished against the U.S. unit at \$1.6354, a fall of 45 points from 1.6400. Interest rates differentiated the current market from the previous market's performance and its trade-weighted index was the lowest for one year. Against the D-mark it was unchanged at DM 2.6100. It was also unchanged against the Swiss franc at SwFr 2.0950 and the French franc at FF 5.2050. The yen it stood at ¥224.70 from ¥224.60.

**D-MARK** — Trading range against the dollar in 1984 is 2.5425 to 2.6200. March average 2.5997. Trade-weighted index

### Prices retreat

Prices retreated on the London International Financial Futures Exchange yesterday in response to the complete change in sentiment overnight on the U.S. financial markets. The optimism shown before the weekend and in early trading Monday was badly hit by the sharp rise in the New York Federal funds overnight rate to 10 1/2 per cent and the failure of the Federal Reserve to intervene on Monday by adding reserves to the banking system. This led to speculation that the Federal Reserve Committee meeting of last week had confirmed the earlier temporary decision to allow Federal funds to trade above 10 per cent, thus confirming tightening of U.S. monetary policy.

Traders suggested that Europe is generally confused about the U.S. credit markets, and is reluctant to lead from New York and Chicago.

The lower opening of the Euro-dollar June contract was in line with the previous U.S. close, and

## FINANCIAL FUTURES

### Prices retreat

The low of 88.96 is a significant chart support point, which traders were pleased to see held. Some reasonable buying developed at the lower levels, although U.S. market operators came in as sellers and soon wiped out any attempt at a rally.

Volume was good in both Euro-dollars and gilt futures, while turnover in short sterling was also more encouraging. Funs did not appear to be reacting to events in the U.S., particularly the weaker bond market; the weakness of sterling; and nervousness about the miners strike. There was a reasonable balance between buyers and sellers after the initial fall, and this helped to stimulate volume, which eventually led to a small rally, although further selling soon developed when prices approached the opening level.

Short sterling for June delivery also opened lower, and lost further ground with the opening of U.S. markets.

## EMS EUROPEAN CURRENCY UNIT RATES

Country	Unit	Rate	% Change
Belgium	B Franc	40.336	+0.002
Denmark	Kr	8.1404	+0.002
Germany	DM	2.2915	+0.002
France	FF	6.5596	+0.002
Italy	Lira	2.036	+0.002
Netherlands	Guilder	3.7603	+0.002
Spain	Peseta	166.638	+0.002
UK	£	1.6354	-0.002

## THE POUND SPOT AND FORWARD

Month	Rate
Spot	1.6354
1 month	1.6354
3 months	1.6354
6 months	1.6354
12 months	1.6354

## THE DOLLAR SPOT AND FORWARD

Month	Rate
Spot	2.6100
1 month	2.6100
3 months	2.6100
6 months	2.6100
12 months	2.6100

## OTHER CURRENCIES

Country	Unit	Rate
Argentine	Peso	47.04-47.12
Australia	Dollar	1.5180-1.5210
Canada	Dollar	0.8371-0.8382
Denmark	Kr	8.1404
France	FF	6.5596
Germany	DM	2.2915
Italy	Lira	2.036
Netherlands	Guilder	3.7603
Spain	Peseta	166.638
UK	£	1.6354
US	\$	1.00

## CURRENCY MOVEMENTS

Country	Change
US	+0.002
UK	-0.002
DM	+0.002
FF	+0.002
¥	+0.002
SwFr	+0.002
DMk	+0.002
ITL	+0.002
ESP	+0.002
ARG	+0.002
AUD	+0.002
CAD	+0.002

## LONDON

Contract	Price
Three-month Eurodollar	88.96
Three-month Sterling	92.50
Three-month US Treasury	92.50
Three-month US Treasury	92.50

## CHICAGO

Contract	Price
Three-month Eurodollar	88.96
Three-month Sterling	92.50
Three-month US Treasury	92.50
Three-month US Treasury	92.50

## EXCHANGE CROSS RATES

From	To	Rate
£	\$	1.6354
\$	£	0.6119
DM	\$	0.3789
\$	DM	2.6422
FF	\$	0.1523
\$	FF	6.5625
¥	\$	0.0045
\$	¥	224.70

## CURRENCY RATES

Unit	Rate
US Dollar	1.00
UK Pound	0.6119
DM Mark	0.3789
FF Franc	0.1523
¥ Yen	0.0045
SwFr Franc	0.4556
DMk Mark	0.3336
ITL Lira	0.0020
ESP Peseta	0.0060
ARG Peso	47.04
AUD Dollar	0.67
CAD Dollar	0.71

## EURO CURRENCY INTEREST RATES (Market closing rates)

Term	Rate
Short term	8.50%
3 days notice	10.10%
1 month	10.20%
3 months	10.30%
6 months	10.40%
12 months	10.50%

## MONEY MARKETS

UK interest rates showed little change yesterday despite a firmer trend in U.S. interest rates. Three-month interbank money was unchanged at 8 1/2 per cent as were three-month eligible bank bills, bid at 8 1/2 per cent. Overnight interbank money opened at 8 1/2 per cent and ended at the day to finish at 1 per cent.

The Bank of England forecast a shortage of around £600m initially with factors affecting the market including maturing Treasury bills together draining

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## MONEY RATES

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## FT LONDON INTERBANK FIXING

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3 months	8.50%
6 months	8.50%
12 months	8.50%

## LONDON MONEY RATES

Term	Rate
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## FT COMMERCIAL LAW REPORTS

### Natural forum is place where tort committed

**CORDOBA SHIPPING CO LTD v NATIONAL STATE BANK, ELIZABETH, NEW JERSEY**  
Court of Appeal (Lord Justice Ackner and Lord Justice Robert Goff): March 29, 1984

Byrne (1984) AC 465, a negligent misrepresentation by a bank as to creditworthiness was actionable within the UK and accordingly, where the tort of negligent misrepresentation as to the creditworthiness of a guarantor is allegedly committed by a foreign bank in the UK in that the representation, made by telex, is received and acted on in the UK, leave should be given to serve proceedings out of the jurisdiction in the absence of good reason to the contrary.

The Court of Appeal so held when allowing an appeal by Cordoba Shipping Co Ltd, Liberian owner of the MV Albatross, from the decision of the District Judge in New Jersey to set aside service of a writ out of the jurisdiction, in its action for damages against the National State Bank, Elizabeth, New Jersey, for negligent misrepresentation as to the creditworthiness of a guarantor.

**LORD JUSTICE ACKNER** said that in September 1979 the MV Albatross was chartered by ber to Cordoba Shipping Co Ltd, a Liberian company. The fixture was negotiated and concluded by telephone and telex between two firms of brokers in London.

Maro's obligations under the charterparty were guaranteed by a Connecticut company. Before concluding the charterparty the owner's brokers required a banker's status report on the guarantor. The bank sent a reference to the guarantor's banker in London, saying that its experience of the guarantor had always been favourable.

The charterparty was not a success. The vessel was not paid and the vessel was re-delivered at the end of 1979, there was over \$200,000 overdue, including unpaid bunkers.

The owner brought proceedings against Maro and the guarantor in Connecticut, and obtained an arbitration award in New York against Maro for \$348,539.

The award was not honoured. In New York enforcement proceedings judgment was entered for the owner for \$403,883. It was paid a little under \$100,000.

The owner therefore began the present proceedings against the bank. Before Mr Justice Staughton it established that the court had power to give leave to serve the writ out of the jurisdiction because the action was founded on a tort committed within the jurisdiction.

It still had to satisfy the judge that it was a proper case for the exercise of his discretion. In English law, such Hedley

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**LORD JUSTICE ROBERT GOFF** said that the judge's conclusion that the natural forum for the action was the U.S. could not be sustained.

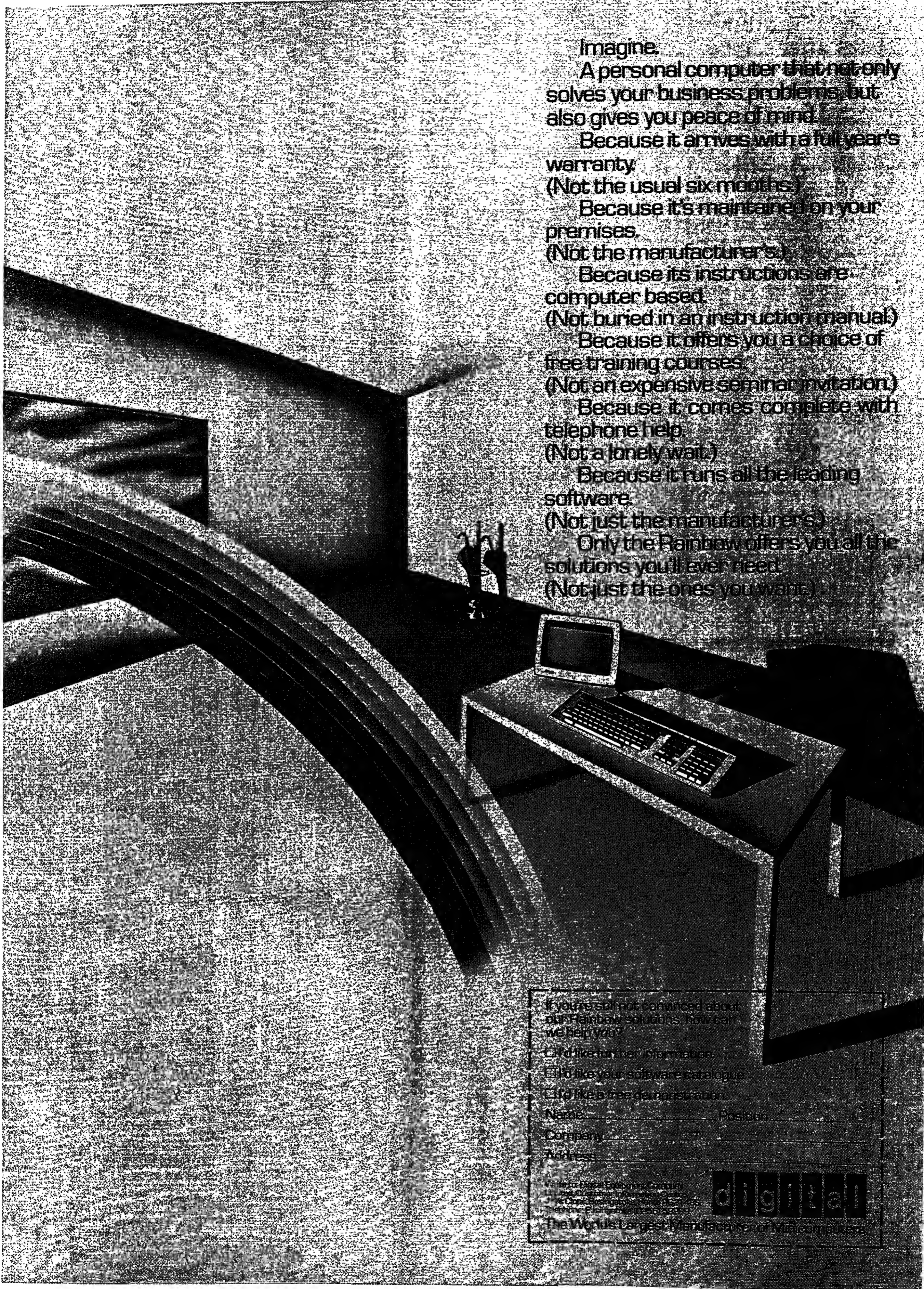
In *Distillers (Biochemicals) v Thompson* (1971) AC 458 Lord Pearson said: "It is manifestly just and reasonable that a defendant should have to answer for his wrongdoing in the country where he did the wrong."

It was clear that the jurisdiction in which a tort had been committed was *prima facie* the natural forum for the determination of the dispute. It was thus the natural forum. The law was certain and only the fact would be in issue, whereas in New Jersey time and money would be expended on argument on the law.

Given that England was the natural forum, the judge was in error in deciding that its choice could be criticised as an example of forum shopping. Also, he was in error in paying any regard to the proceedings which the owner had taken against Maro and the guarantor in New York and Connecticut. The causes of action and the parties were quite different.

In view of these errors the judge's exercise of his discretion should be set aside and the court became entitled to exercise its original discretion of its own choice. The court having jurisdiction was the most appropriate court, and where it was manifestly just and reasonable that the defendant should answer for his wrongdoing.

That being so, it must usually be difficult to resist the conclu-



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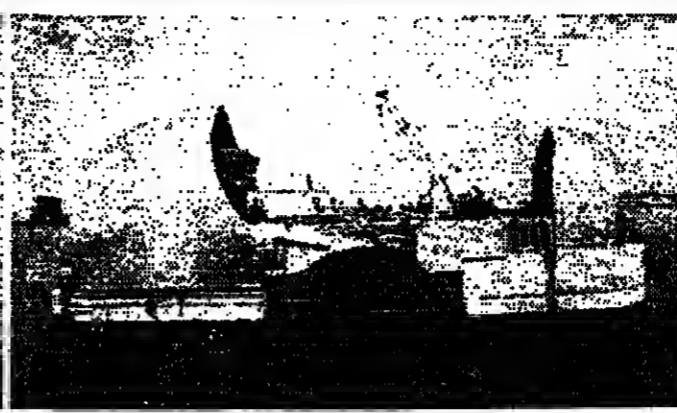




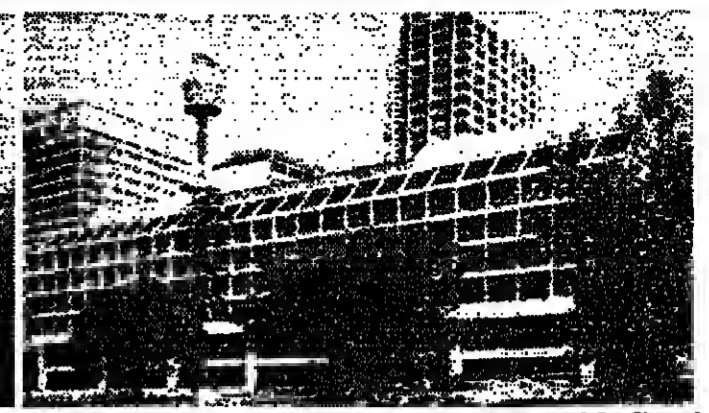
The new town hall in Chester-le-Street, County Durham, completed in 1982. Quantity surveyor: Gleeds.



The recently refurbished Grands Magasins de Louvre, Paris, Q.S.: Cyril Sweet and Partners (France)



The Thomas Flood Barricade, Q.S.: Coe-Tarmac-HSM in association with Rendel, Palmer and Tritton and George Corleway and Co.



Parliament House in New South Wales, completed last year, Q.S.: Chas. A. Harding, Wisnall and Trollope

THE ORIGINS of quantity surveying as a distinct activity are hard to trace much further back in time than the seventeenth century. After the Great Fire of London it is clear that the London building world needed a group of specialists to measure and value materials and construction.

Alongside the guilds of masons, carpenters and plumbers we can witness the emergence of the architect. With Inigo Jones came some of the earliest designs on paper for completed buildings, although there are some medieval cathedrals that have extant measured drawings for large parts of their structure.

Strasbourg being a particularly good example.

Payment for buildings was usually by the direct method, day rates being offered to craftsmen on a scale commensurate with their skills. As the idea of a complete design developed it became possible to divide up the amount of work to be done by masons or carpenters, etc. However, this depended on the actual measuring of quantities and fixing of their value.

The building boom that followed the fire of London encouraged the emergence of the architect and the growth of single trades contracting for their own part of the building work. The measurer had to be invented if he did not already exist—there was a real need for someone to ensure impartiality between the proprietor and the workman.

It was not until the early 19th century that the idea of "contracting in gross" became the norm instead of dealing and fixing prices with each building trade separately. Architects had to prepare detailed and accurate drawings and specifications for the new form of contract and surveyors rapidly became indispensable in the preparing of tenders and contracts.

The 1834 fire that destroyed the Palace of Westminster was partly responsible for the use of the quantity surveyor as a major cost. The architect who won the competition to design the new Houses of Parliament, Charles Barry, was asked to prepare an estimate of the cost for Parliament.

He had not prepared detailed specifications or drawings but he was assisted by a Henry Hunt and they came up with a figure of £724,984—which was basically accurate. The final cost was more but this was not the fault of Barry. The estimate was exceeded because Parliament changed its mind on several plans and, because springs were discovered, there was subsequent foundation trouble. Henry Hunt made himself a large sum but the poor architect working on a fixed fee was less fortunate.

The architects have in some ways never recovered from the division of the building profession into architects and surveyors. The measuring surveyors were denigrated by the architects because they had nothing to do with design.

**Exclusive**

The establishment of the RIBA, Royal Institute of British Architects, in 1834, made architects exclusive beings and removed from one side of the building profession a highly trained element that does in fact have some influence on design matters. It was the rise of the architects as exclusive designers that actually caused the creation of a surveying profession.

There are now some 30,000 members of the Quantity Surveyors' Division of the Royal Institution of Chartered Sur-

veyors — 20,000 are fully qualified and the rest are on three-year training courses.

They have come a long way since the days of measuring quantities for the builder and architect and today's complex financial climate offers the quantity surveyor major new opportunities.

In the 1970s the quantity surveyor was expected to fulfil a very clearly defined role: "To ensure that the resources of the construction industry are utilised to the best advantage of society by providing, *inter alia*, the financial management for projects and a cost consultancy service to the designer and client during the whole construction process."

"The distinctive competence of the quantity surveyor is a skill in measurement and valuation in the field of construction in order that such work can be described and the cost and price be forecast, analysed, planned, controlled and accounted for." There is no doubt that since

that was written, by the Royal Institute of Chartered Surveyors in The Future of the Quantity Surveyor, the role of the traditional quantity surveyor has changed radically.

There are several new fields: manpower planning, resources control and the assessment of the effects of time on construction projects. The typical quantity surveyor is now a very powerful figure in the construction world; he has financial muscle and he is extending his role into the fields of contracting, civil and industrial engineering, services consultancy and project management and control.

The profession is changing in two ways; it is responding to advances in technology; and it is responding to the changing nature of professional practice brought about by the advent of fee competition.

The new technology has converted the formerly lengthy tasks of data collection, tender documentation and cost plan-

ning into speedy keyboard operations. This allows clients to receive a better and cheaper service, and also enables them to take a longer-term view of the real cost of buildings and their maintenance. Life Cycle Costing as the procedure is known is a new growth area and one which offers the option of saving money over the long term.

Energy conservation planning is another growing new field, as well as energy planning at the design stage.

The profession will in the future be seeking to spread the skills to management, long term budget planning and detailed economic forecasting.

The potential demand for the surveyor's services is very wide indeed. It is not unusual for a large firm of quantity surveyors today to employ architects, engineers, landscape architects, interior designers, graphic designers, estimators, loss adjusters, management consultants and project managers.

With this range of skills operating under the quantity surveying umbrella it is clear that they are fast becoming the leaders in the building professions.

**Independence**

The UK is rich in the knowledge of how to buy a new building, and it is the quantity surveyor who, according to Mr Alex Trimmer, the secretary of the Quantity Surveyors' Division, "knows all the ways of building procurement and is the only person to give independent cost advice."

It is this independence that gives the quantity surveyor the edge over the other leading design professions, architects and engineers.

The expansion of the quantity surveyor's role has paradoxically, been due in part to the fall in the past 10 years in new building and engineering work and the marked growth in the rehabilitation of older buildings

and the need for energy conservation.

Even as the recession lessens, the private sector is hesitating before commissioning large-scale new building programmes. Clients demand more value for money, and the quantity surveyor has an increasingly important role advising on the utilisation of existing assets.

Overseas work is another area showing growth, and with some 3,000 quantity surveyors working in 120 different countries it has been described as "the UK's invisible export, valued at £40m per year with no real overseas competition." Both China and Japan have recently sent delegations to investigate the advantages of q.s. techniques for use in their own construction industries.

In another major change the quantity surveyor is now allowed to advertise his services. The rules were changed last November and it is now possible to advertise, a move followed shortly afterwards by architects.

Yet, despite these changes, the two main roles of the chartered quantity surveyor remain the same in principle. The first is to give independent cost advice to clients, and the second is to advise on, and if necessary arbitrate between, the many designers involved in a modern building.

All the costings of the architect, the structural engineer, the mechanical, electrical and heating engineers have to be kept within the client's budget. This is where the independent client advisor is most needed. It is the q.s. who will guide the client towards the best choice in terms of value. He has to be the master of both procurement and management.

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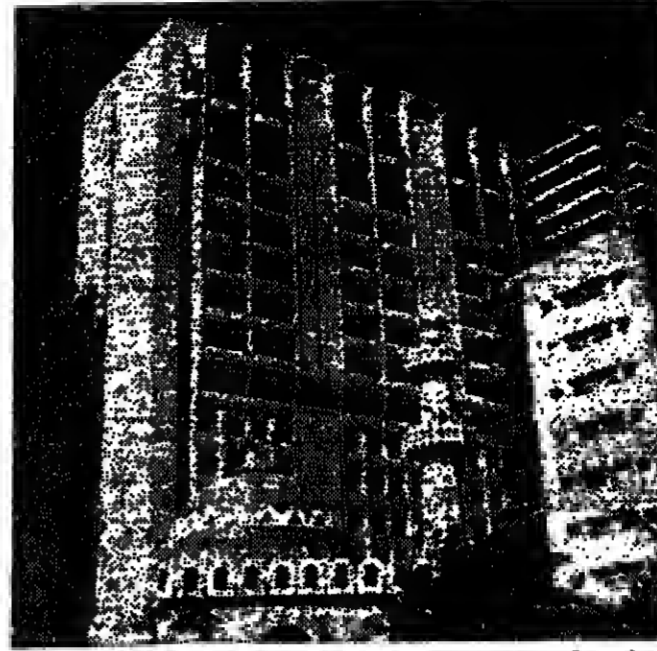
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# QUANTITY SURVEYING II

Investment in construction

## Pick-up expected in industrial building



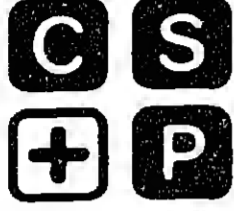
The new ADGAS headquarters in Abu Dhabi. Quantity surveyor: Areco.

latest (January 1984) membership figures for quantity surveying members of the RICS show that of the almost 4,000 principals in private practice, about 660 are working outside Europe and another 155 are working in Europe. The proportion of assistants working in all parts of the world is similar. As consultants to the World Bank, British quantity surveyors have recently worked on a variety of projects. On the islands of Trinidad and Tobago, for example, they have helped provide a teacher training college and 22 schools for children of secondary school age. A team from the UK carried out the initial feasibility study, the aim being to prepare cost limits for each of the sites, taking account of the topography and variety of soil conditions. Bills of quantities were computed in London and the schools were built in record time. The important role that the quantity surveyors play overseas is to ensure value for money for their clients. There has been a remarkable record of success, ranging in the Middle East, from university complexes in Kuwait, flats in Dubai, the international trade and exhibition centre in Dubai and a major aluminium smelter in Bahrain. Perhaps one of the most unusual foreign ventures has been the project management of offshore oil field development in Indonesia. Preparation and monitoring of the budget for district barges in the waters off eastern Borneo. Major new town development in the Sudan involves British construction cost consultants as does a DM 600m programme for 15 high schools in West Berlin. The institutional support for the standardisation of international principles of measurement could well pave the way for a wider international role for quantity surveyors and a parallel increase in foreign earnings. Where the surveyor is playing an increasing part in the generation of investment is in the large and increasingly international, multi-disciplinary practices. These are often moving into the new realms of "building economics" and data collection and computing. This sort of activity moves the surveyor on from merely being involved in construction as a building procurement adviser to joining the vanguard of contractual development and building management. This is where the growth areas lie for the profession and the investor in the building industry.

Colin Amery

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RECENT REPORTS from the National Economic Development Office on prospects for the construction industry are generally optimistic. The forecast for the increase in all new construction work in 1984 is seen by Nedo as only 1 per cent. For 1985 a decrease in the industry's total workload of 2.5 per cent is anticipated as against a forecast of six months ago of 2 per cent. It is the dramatic decrease in new housing work that particularly affects the new figures (March 1984). Housing work in the public sector is expected to decrease by 14 per cent in 1985. There are some more hopeful areas in the construction field. There seems to be a general feeling that the decline in industrial building is expected to end as manufacturing industries move out of recession. Government grants are available for new and refurbished manufacturing premises and there is likely to be an increase in building prompted by the announcement of the six freeways.

While public expenditure continues to be reduced it is curious that in areas such as the inner cities it is only the injection of government money that can encourage new enterprises where private initiative has long since been abandoned. Is it the role of professionals like quantity surveyors to press

the government to maintain the infrastructure of society? Mr Clifford Dann, president of the Royal Institution of Chartered Surveyors, recently urged the Government to maintain and renew the country's infrastructure. He was particularly anxious about the fate of the national "lifelines of water supply and sewerage." The quantity surveyor should be in at the beginning and government should maintain essential public investment, he urged.

#### Rehabilitated

Private housing represents the only real growth sector in the construction industry with a not very cheerful outlook for private commercial developments, with large amounts of unlet office space on the market.

One way that the quantity surveyor can help to generate investment in construction is in his role as adviser in the tax planning of buildings. Careful taxation cost planning can help clients to make decisions about investment in new or rehabilitated building stock.

Surveyors are as well placed as any of the professions to advise in this field: on regional development grants, the assessment of capital allowances during construction, eligibility of plant for capital allowances and so on. For example, a

### Construction contracts

## Search for a better system

AN INCREASING dissatisfaction with existing methods of building procurement was identified a year ago by chartered quantity surveyors E. C. Harris. They posed the question: "How can the building professionals and the industry respond to the challenge of providing a better system and thereby decrease the client's risk?"

Just before the end of last year it became clear that commercial clients, strongly represented by the British Property Federation, had become tired of waiting for this response and had "grasped the nettle," as Harris puts it now, by producing their own radically new system.

The client has had a right to be confused at the number of options available and, within those options, the number of variations on the basic theme. Gardner and Theobald look at it via the legal, or potentially legal, documentation; the Aqua Group summarises types of contract in common use as follows:

1. Fixed price contracts, with or without fluctuations, based on:
  - performance specification;
  - specifications and drawings;
  - schedule of rates;
  - bills of quantities;
  - bills of approximate quantities.

2. Cost reimbursement contracts:
  - prime cost plus percentage;
  - prime cost plus fixed fee.
3. Target cost contracts.
4. Management contracts.
5. Design/build contracts.

JCT documentation, according to Gardner and Theobald, is "consensus — voluminous. Various parties, such as contractors and so on—and on—are concerned with design and construction. They all have a veto."

Peter Holden, a partner of G & T, also notes that standard management contracts (produced by the contractors) are "skinny" documents. "You have to build in protection for the client," he says, "and that can take a long time—up to six months."

G & T has produced its own variation on JCT 1980. "Two aspects to the form of contract were becoming out of line with employers' requirements," they say.

So it made two changes. In the document, it says that some standard procedures for the appointment of nominated sub-contractors selected by consultants. This complexity led to the growing practice of selection and appointment of domestic sub-contractors, responsible directly to the contractor.

Now, says David Male of G & T, the architect and contractor will jointly agree on who they get. The contractor is also being made to take on responsibility for the development of design. "The architect says what it will look like," says Mr Holden, "but development of design—how curtain walling fits together and how it fits to the structure—is what people are considering."

"If you think it through this is the responsibility of the main contractor—who can get caught if anything goes wrong five years later."

There is no standard form of management contract; but JCT is taking active steps to try to publish one. Management contractors such as Bovis and John Laing all have their own forms of contract which, says Mr Holden, "may tend to be slanted slightly in their favour."

G & T, says Mr Male, therefore has formulated its own recommendations for the management contract. "We have one available for discussion and

recommendation to a prospective client, the object of which is to be fair to both employer and contractor."

The BPF Manual, paraphrasing E. C. Harris's reading of it, aims to do a number of things. Changing attitudes and producing good buildings more quickly and at lower cost come high on the list. Other aims, which are also hard to argue with, include: motivating individual members of a building team, removing the risks so that the commercial success of the designer and the contractor depends more on their own abilities and performance. The BPF wants to re-establish awareness of real costs by all members of the design and construction team, and to eliminate practices which absorb unnecessary effort and time and obstruct progress towards completion.

The BPF Manual has had its share of praise. Criticism comes in, as one observer sees it, of "its basic premise that all buildings should be pre-designed... clients must have the facility for change which may come about through their own desire."

It has also been called "a charter for project managers," and the apparent absence of bills of quantities questioned.

William Cochrane

### ALTERNATIVE FORMS OF BUILDING CONTRACT

TYPE	Contract Documents	Advantages	Disadvantages
Standard JCT 1963 Edition	Drawings Bills of Quantities	(a) Lump sum contract (b) Well tested (c) Facilities for nominated sub-contractors (d) Variations easy to implement	(a) Extensions of time (b) Fluctuations clause until work is complete rather than contract completion date
Standard JCT 1980 Edition	Drawings Bills of Quantities	(a) Lump sum contract (b) Variations easy to implement (c) Extensions of time clause improved and provisions included for committed work (d) Fluctuations clause improved	(a) Facilities for the appointment of nominated sub-contractors extremely cumbersome
Management Contract	Purpose drafted Conditions of Contract Drawings Skeletal Bills of Quantities	(a) Where time is of major importance (b) Possible to start work before design is complete (c) Can be used for complex works where it is difficult to define the work (d) Totally flexible	(a) Increased financial risk to the client (b) Increases in cost of administration and supervision (c) Absence of Model Conditions of Contract
ACA Form of Building Agreement 1982	Drawings Time Schedule* Rates Specification or Schedule of Rates or Bills of Quantities	(a) Lump sum contract (b) Facility for design responsibility and production of information by Contractor (c) Optional and very strict clauses for extensions of time	(a) Certain drafting discrepancies (b) Generally an untried document
British Property Federation System for Building Design and Construction†	Drawings Programme/Schedule of activities Model Form of Contract still awaited	(a) Less risk for the employer (b) Development of detail design with the Contractor (c) Predetermined design (e) Fixed stage payments	(a) The design must be fixed before tender (b) Hazardous adjudication of tenders (c) Variations and change of design will be difficult to incorporate and value (d) Multiplicity of professional advisers (e) No available forms of contracts and forms of appointment of consultants

\* The time schedule is not in the contractor's programme but sets out a series of major events in the course of the contract such as the date for possession of the site, partial handover, maintenance periods, etc, and a timetable for the supply of information.  
† Not yet a form of contract.

Source: Gardner & Theobald, Chartered Quantity Surveyors

### CONSTITUENT BODIES OF THE JOINT CONTRACTS TRIBUNAL (JCT)

British Property Federation	Committee of Associations of Specialist Engineering Contractors
Royal Institute of British Architects	Federation of Associations of Specialists and Sub-Contractors
Building Employers Confederation	Association of Consulting Engineers
Royal Institution of Chartered Surveyors	Scottish Building Contract Committee
Association of County Councils	Source: Tenders and Contracts for Building, by the Aqua Group, Granada Publishing, £5.95 net.
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# QUANTITY SURVEYING III

## Life cycle analysis

# Taking the running costs into account

IN JULY 1983 the Royal Institution of Chartered Surveyors published an important research document, Life Cycle Costing for Construction which was prepared by a quantity surveyor (Roger Flanagan), an economist (George Norman), with a general practice surveyor (St. David Forbury). Produced under the auspices of the department of construction management at the University of Reading it is the product of research carried out by the Quantity Surveyors' Research and Development Committee.

The idea behind this new economic tool is that the life cycle cost of a building is the total cost of running that building throughout its useful life. Life Cycle Cost Analysis (LCCA) has proved that the capital cost of a building is approximately one-third of the total life cost of the premises.

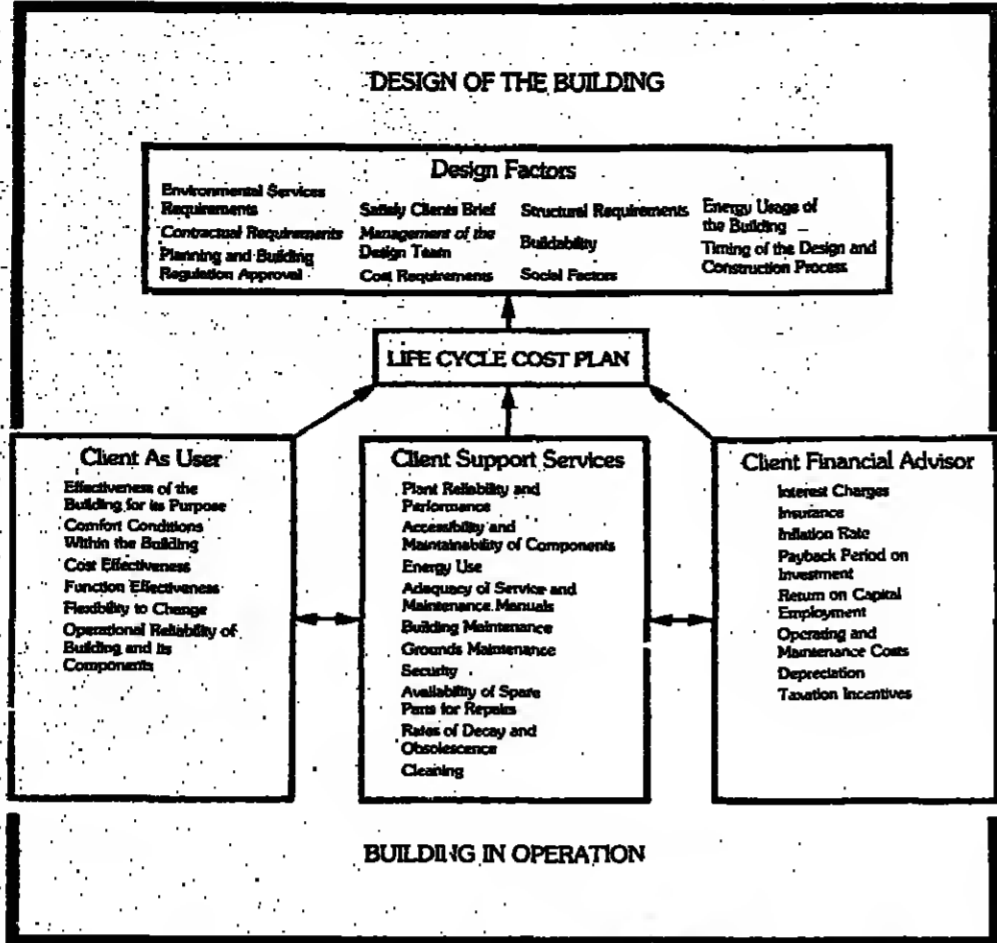
Life cycle cost techniques are most relevant in their application to the evaluation and identification of durable assets. They are, therefore, particularly applicable to the building industry. Any businessman looking at a new building or the acquisition of existing premises is considering an investment that is intended to last for some years.

### Maintenance

There are two areas where this approach can lead to better financial planning. The first is at the design stage when decisions are being made that will affect the future maintenance and running costs of a building. The second involves the question of running costs of an existing set of premises including an evaluation of alternatives.

The use of LCCA acts as an encouragement to owners of buildings to see them as plant or equipment—like any other productive unit. The cost of the premises should be planned for its full life—and decisions taken at the design stage will affect all future costs. Total life cycle cost becomes an essential part of the design/decision making process.

How are future running costs to be predicted? To discover capital costs is simple enough, but running costs are going to be incurred at varying points in the career of the building. An important element is the presentation of current and future costs in equivalent terms.



It has been tempting in the past to suggest that the lowest initial capital cost of a building will also offer the lowest running costs in the future. This is far from true. It is often possible to reduce running costs by increasing the original capital expenditure.

Although initial costs are clear at the early stage it is hard to calculate long term costs. However it is possible to see in some cases that long term costs can outweigh initial capital expenditure. The surveyors are trying to encourage clients to look at the long term costs when choosing designs for new buildings or additional components.

In the public sector capital cost is often the only criterion in major decisions for new buildings. Monitoring running costs and overall cost management are tools which should be

applied to existing and new buildings—offering a distinct potential for cost savings.

There are several problems for the introduction and widespread use of life cycle costing in the building industry. The collection of performance data can be difficult; the long period of construction time alters the perspective between design and operation; and heating and lighting costs can be radically affected by minor changes in plan or siting.

The process is complex because the owner is being asked to survey and monitor the interaction of a building with its users, sometimes before the completion of the building or before a clear programme of future use has been established. It is worthwhile trying to look beyond the complexities of this new technique to identify the possible advantages to

those concerned with the commissioning of new industrial and business premises.

The majority of clients concerned with the commissioning of a building are not themselves actually concerned with the business of building. They are concerned to make their businesses efficient and profitable. Therefore they are almost entirely vulnerable to the quality of professional advice they receive. This is why the role of the quantity surveyor as a member of the management team, constantly available to monitor and predict operating and maintenance costs as well as the initial outlay, can be of the greatest importance.

What the professional adviser has to offer his client is a method of taking account of the long term implications of current design decisions. At the

moment, perhaps, the most widely used form of this sort of advice is in the field of energy consumption. It is possible to predict the rising energy costs (up to a point) and early advice on the selection of sources is now considered essential.

In the U.S. certain states request building, architectural and engineering firms to justify their selection of building systems by the use of LCCA. Selection of fuel and energy systems with the lowest life cycle costs is insisted upon—using data gathered by the state Office of Construction.

It is also relatively simple to predict the future costs of the provision of utilities, caretaking services, security systems, repairs and alterations and building management.

Evolution

To cost the relationship between the design of a building and a building in use over a long period is the basis of the evolution of a life cycle cost plan (see diagram). Gathering the information is the most crucial area and there are four types of data that are necessary for analysis.

Cost data—bills for fuel, maintenance, rates, security, water, insurance, cleaning and management—is essential for any completed building.

Physical data concerns the area of window to wall, the nature of the ceiling and floor areas, the type of heating system, the types and number of sanitary fittings, the nature of the sort of function that go on in the building.

Alongside this cost and physical data collection must be ranged the qualitative and performance data. This necessitates regular monitoring of the condition of the fabric, finishes, and services. Data will also be needed to explain the performance of the plant and the cycles of occupancy and maintenance.

With adequate data it is necessary to make certain assumptions about the occupancy, use and the adoption of a discount rate that assumes a similar level of inflation for components like energy and labour costs. Objectives can be as diverse as planning for as little as one year's costs, collection of data for a taxation cost plan or full-term planning and cost management for the whole life of a building.

The quantity surveyor has

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Colin Amery

### PROFILE: TURNER AND TOWNSEND IN THE NORTH SEA

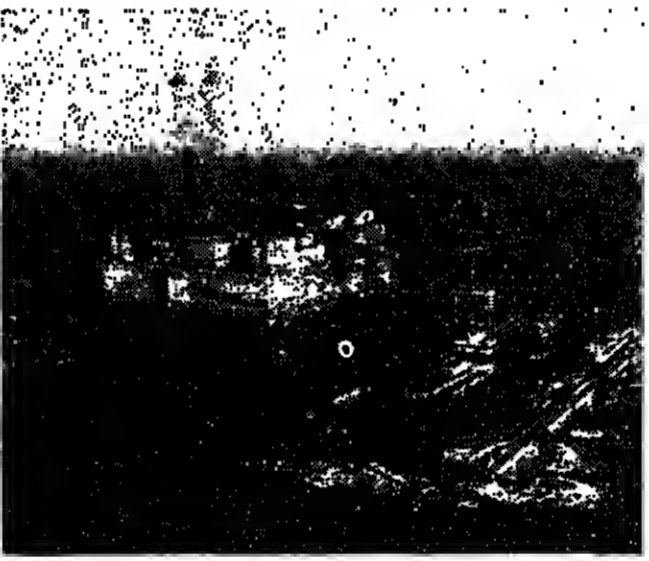
# Loosening the traditional links

THE TURNER and Townsend practice was founded in 1946 and now has 10 offices nationwide. It is involved in every type of construction work from the restoration of a Roman fort in Darlington to the erection of a geothermal exploration project in Ethiopia's Rift Valley.

But it is only in the last year or so that the practice's publicity material carries, alongside "Chartered Quantity Surveyors," the inscription "Construction Economists." When

one examines Turner and Townsend's involvement in the North Sea offshore construction efforts of the last decade, the most surprising aspect is that it has taken so long for the economic role to be so recognised.

There can be no doubt that the traditional umbilical between the q.s. and the bill of quantities is increasingly being loosened if not severed. The practice now offers, in its list of general professional services available, four alternatives to



Chevron Petroleum's Ninian Field platform. Turner and Townsend's other North Sea clients include Shell UK and Texaco.

the bill of quantities as methods of tender document preparation; schedule of rates; prime cost contract; target cost contract; and lump sum/turkey contract.

When it comes to the North Sea scene, the picture was even more confusing to begin with, as there were no standard rules of measurement for the very specialised civil engineering and mechanical and electrical engineering involved. As a result, quantity surveyors had to devise their own, often in close co-operation with the engineers in charge of the project. In the process they were able to produce a rationalised bill of quantities which, according to Turner and Townsend partner Cecil Dennis, is the only future hope for this dinosaur, whose imminent demise has been heralded several times in recent years.

Significantly, when asked to define the q.s.'s role in North Sea oil rig construction, Mr Dennis's response did not even mention the bill of quantities—it was all about economic and financial considerations and advice.

The most important thing about the North Sea and an aspect which becomes particularly striking when compared to oil rig construction in the Gulf of Mexico where Turner and Townsend have also been involved—is the very short period during which a rig can be floated out and erected. This is the famous "weather window," which lasts between July and August. It is vitally important to time projects so that this weather window is not missed: the cost of a few weeks delay could be a year's production—perhaps £10m.

contracts are most often agreed direct between the client and the fabricator, and the q.s.'s role is limited to contract administration—payment on account, final account and claims.

Getting the jacket to the field is again an operation organised by the oil company direct. As it is basically a shipping/craning contract, bookings have to be done about a year in advance. Once in place, a deck is laid on the jacket and on the deck are assembled the various modules.

The construction of the modules is an on-shore matter, and here the more traditional q.s. roles are most apparent. Contracts are negotiated with shipyards for three basic types of modules: accommodation, services and production.

For the module contracts, quantity surveyors are involved in every stage: pre-tender planning, documentation preparation, bills of quantities, cost control, payments on account, sub-contract management, total cost implications and claims.

Now does their role end once the modules are completed. Because of the complexity of the service ones which contain vast quantities of pipes and cables, a special operation, with its own separate contracts, takes place. This is known as "hook up"—assembling the modules and connecting them up so that the entire assembly is operational: electrical, piping and communications.

"Hook up" is an area where q.s. expertise has developed significantly in the past few years and it is a discipline where their special qualifications really come into their own:

light organisation and tying up of a vast number of literally loose ends.

Here, again, timing is of the essence. The stormy conditions in the North Sea mean that "hook up" operations also need to be carried out having a consideration for the possible loss of production if completion is delayed.

Turner and Townsend clients in the North Sea oilfields include Chevron Petroleum UK, Occidental, Phillips Petroleum, Shell UK and Texaco. On the major projects they have been employed by giant multinational civil engineering companies such as the Dutch Lummus and Italian Spangopgetti.

On shore, meanwhile, the practice has also been involved in the construction of oil terminals and refineries on Teesside and a large number of petrochemical plants, mainly for ICI.

An important part of the q.s. role comes after the contract is completed. Post-contract service can often make the difference between getting further work from the client or not. In the case of the North Sea, such duties would include servicing of the drilling, helicopter facilities, spares and even repair and maintenance of pipelines which can suffer damage from shipping. When claims arise, the practice can offer practising arbitrators as well as advice on negotiation, grants and even liquidation and bankruptcy. Its specialist staff also appear in the courts as expert witnesses.

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# QUANTITY SURVEYING IV

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and there will an equal number (60) of executive and economy houses, and 40 starter units as well as 50 single-persons flats, 60 workshop houses and 40 plots for sale for various self-build projects. At the same time 60 housing association houses will be built to rent, and 30 more sheltered flats, also to rent. This should remove the new village far from the one-class estate image.

Bernard Williams calculates that all site development costs, including sewage and roads, would be self-financed at no cost to existing ratepayers in the district. The rates paid by villagers would help maintain the engineering installations once adopted by the public authorities.

Mr Williams expects the village to generate one job per four houses. Employment will be created by the "workshop" houses which will have live-in craftsmen and there will be some holiday and leisure-related jobs. Energy conservation, should produce employment spin-offs. In addition there will be obvious employment prospects in local shops and schools and in area maintenance, which could include a market garden.

#### Tolerances

Although quantity surveyors are not normally associated with the great outdoors, it is obvious that the need for cost control does not suddenly terminate as one leaves the concrete jungle for green and pleasant countryside.

For example Bernard Williams' involvement in the proposed School for Woodland Industries, at Hook Park, Dorset, is very much on the construction cost-control side. The scheme designed by ARK/Frei Otto/Buro Happold for the Parham Trust, is not unusual in its proposal to build a workshop, community centre and living accommodation. It is unusual in that it proposes to build them all using the old art

ANYONE THINKING of creating a new village in the heart of a forest in South Wales may be excused for not thinking that a quantity surveyor would make his ideal project co-ordinator and development consultant. But then Bernard Williams is no ordinary quantity surveyor.

Indeed, he describes his Bromley practice as "chartered surveyors, building economists, planning and development consultants." And, although far from ashamed of his q.s. background, Mr Williams has for the past decade been trying to lead by example a move which, he believes, could be the profession's only hope.

The village in South Wales is a project in which Bernard Williams' role is, in his own words, "a million miles from traditional quantity surveying."

Although details of the scheme must remain under wraps until local councillors have seen the proposals later this month, the results of the feasibility study conducted by Bernard Williams are favourable and negotiations with the Welsh Development Agency and a friendly society, spearheaded by architect/planner Jim Grove and Nick Falk of URBED, are going well.

#### Independent

The basis of the project is for a village which can be viable through demand from within its own catchment area independent of immigration of employers from elsewhere in the UK or from abroad.

The basis of Bernard Williams' involvement is his firm belief that it is down to the quantity surveyor to bridge the conventional gap between construction and property. His company's feasibility study for the new village involved a detailed statistical analysis of supply and demand for housing, population and employment trends, building completion rates and

comparable village developments in other locations.

The Williams team strongly denies that there is any contradiction whatever between this kind of activity and the "q.s. roots" estimating and cost control. On the contrary, they have always found that the thorough working knowledge of land and property valuation they have built up over more than a decade has been perfectly complementary, and their workload reflects this diversification.

The main objective of the new village is to produce a "well-rounded community... a combination of architectural, financial and social ideas which should be taken together as a package."

However, there is to be no reliance on idealism—regard must be paid to "market realities and modern standards of building." In order to attract "the kind of people south Wales need to regenerate its economy, including specifically executives from America, Germany, Japan and Holland," the project seeks to be a showcase for innovative solutions to problems such as energy conservation.

Another important aim is to meet—rather than avoid or over-run—the "legitimate demand of others who have an interest in the area." The early involvement of conservationists would be sought with the aim of proving to them that the local woodland environment will be enhanced rather than destroyed by the proposed development.

Practically, the idea is to establish a development trust, which would ultimately be taken over by village residents. Its funds would enable a continuing programme of maintenance to take place. The housing would be developed by a friendly society (or housing society) employing a management contractor and, hopefully, mainly local contractors and sub-contractors.

The housing mix was considered especially important,

and there will an equal number (60) of executive and economy houses, and 40 starter units as well as 50 single-persons flats, 60 workshop houses and 40 plots for sale for various self-build projects. At the same time 60 housing association houses will be built to rent, and 30 more sheltered flats, also to rent. This should remove the new village far from the one-class estate image.

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Mr Williams expects the village to generate one job per four houses. Employment will be created by the "workshop" houses which will have live-in craftsmen and there will be some holiday and leisure-related jobs. Energy conservation, should produce employment spin-offs. In addition there will be obvious employment prospects in local shops and schools and in area maintenance, which could include a market garden.

COLIN WHEELER, PRESIDENT OF THE QUANTITY SURVEYORS' DIVISION OF THE RICS, TALKS TO COLIN AMERY

## Looking beyond the standard disciplines

THE TERM "quantity surveyor" is now scarcely adequate to describe the range of activities that the profession carries out, in the opinion of Colin Wheeler, this year's president of the quantity surveyors division of the Royal Institution of Chartered Surveyors, and head of a large q.s. firm with several offices in the UK.

The possibilities for the profession in the 1980s, he believes, are limitless in the fields of building economics, financial control, construction consultancy, and the newer discipline of life cycle costing.

In the design field the q.s. will also have a growing role to play beyond the standard disciplines of "measure and value," and because there is a good relationship between the contractors and the q.s. there is likely to be a broader future for the design and build firms who may take over some of the roles played by architects.

#### Commercial

The changing nature of the profession is partly the result of the more commercial approach demanded by the Office of Fair Trading, which has made fee competition an accepted part of professional practice. The temptation to offer a lower standard of service for a lower price—a possible danger when the work load is low—needs to be resisted, however, he warns. His office has published an objective series of guidelines offering advice to both clients and members. Competition

should be over resources and service, rather than fees, Mr Wheeler observes.

In the past the fee structure was always open to negotiation and fees were recommended not mandatory. Special negotiations always take place. The housing would be developed by a friendly society (or housing society) employing a management contractor and, hopefully, mainly local contractors and sub-contractors.

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Mr Wheeler: "limitless possibilities for the profession"

The British quantity surveying profession is, indeed, unique in the world and has a reputation for probity that is envied in an industry that is open to possible abuses.

The breadth of the profession means that it is in touch with all aspects of the construction industry. About 50 per cent of the trained q.s.'s are working as private consultants, some 22 per cent work in the public sector, 2 per cent work for contractors or other commercial undertakings and the remaining 6 per cent are in the education service.

As a profession they were put on the map in the development boom of the 1960s when large-scale office

likely to extend beyond the end of the building contract—particularly if the idea of life cycle costing and maintenance is adopted.

The q.s. also has another largely unexplored role as an arbitrator. It is his moral responsibility to see that all sides in a construction deal are treated fairly, a difficult and responsible task given that the q.s. first loyalty is to the client.

Mr Wheeler will be president of the 15th triennial conference of the profession in London this month, an event which brings together the members of the profession—consultants, those working in contracting, and those working in the public sector—to take stock and look ahead. This year the conference has a strong emphasis on the information role of the profession, and on the new versatility that is demanded of the q.s.

It is this versatility that Colin Wheeler is anxious to emphasise as the required new attitude for the future. The qualified q.s. should be able to tackle every aspect of the construction business, he will be telling delegates.

At the same time, development of the profession would be helped by more economic stability for the building industry, he argues, and he is a strong opponent of the use by governments of the construction industry as an economic regulator. "It should be the spearhead of the economic revival," he states.



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# QUANTITY SURVEYING V

New Technology

## Computers take a heavier work load

MINI AND MICRO computers present many opportunities and equally as many challenges for quantity surveying. Some quantity surveyors realised the potential of the computer back in the 1960s. Others are only now beginning to think about investing in hardware or software.

Such delay has been due partly to a tendency for the profession to think of itself as being made up of self-contained practices. The computer, however, waits for no man. It is prompting more and more quantity surveyors to realise that they are, rather, members of a fast-developing profession with its roots in the construction industry. The costs of computer hardware and software are also becoming less and less prohibitive.

Gordon Hunt is a QS advising fellow QSs on how best to invest in high technology. "Computers," he says, "have the potential to assist quantity surveyors in solving the major problems they are about to face. QSs are prime 'number crunchers' and 'data processors' and as such are very susceptible to the introduction of computer techniques."

"The data and number handling capability of computers should be maximised for the benefit of construction industry clients rather than merely computerising present manual quantity surveying activities."

The RICS Building Cost Information Service has carried out a survey into the use of computing facilities and other advanced technologies within the offices of its 1,341 subscribers. The results indicate that many quantity surveyors are already accepting this changing role.

The questionnaire listed nine "traditional" functions, including preparation of bills of materials, Bills of Materials, and variations, fluctuations and office administration.

However, QSs who replied to the questionnaire identified a further 50 applications. These included computer-aided design, environmental analysis, energy calculations, measurement and generation of quantities, project management and network analysis.

This does not mean that QSs are starting to design office complexes, hospitals or shopping precincts. However, QSs are operating as project co-ordinators for such projects, while developments in computer software are making it increasingly

possible for the quantity surveyor to play an important part in the initial stages of a construction project.

A suite of programs offered by SD Microw, for example, is able to produce an estimate of the tender price of a building, at stages from inception to bills of quantity. Originally run on Apple II microcomputers, it has been adapted to any computer which runs the "D" system, including Commodore, Act Sibus, IBM Personal Computer and DEC Rainbow.

Developed in conjunction with a firm of QSs, it has, comments Gordon Hunt, "an infinite number of options. The necessary financial and design restrictions can be collated before design starts. The saving in time, design and building cost and frustration of abortive design and cost work can be substantial."

The development by large multi-disciplinary practices of their own software houses is also indicative of the way that computer is changing the face of the construction industry. BDP Computing Services, an associated company of Building Design Partnership, has developed and is still developing a turnkey computer aided design package called Acropolis. The programme is a three-dimensional modelling system capable of handling design and production data for the various disciplines involved in construction.

### Cost prediction

A program is being written that will schedule the graphic components occurring within three-dimensional models. The addition of non-graphical information will allow the QSs to extract various outputs to assist in cost prediction and bill production.

"QSs will be involved more as the design is being developed," says BDP's Robert Eve. "The bill production stage will be brought forward and the time taken to produce bills will be shortened. For the present, costs for each component in the models will be job-specific, though we are gradually building up our own data bank."

This software is just one example of the way that QSs could influence computer-aided design. Peter Brandon, head of the Department of Surveying, Portsmouth Polytechnic, sees the involvement of QSs in all aspects of CAD increasing. He predicts that as systems



A quantity surveyor at Cyril Sweett and Partners using a computer for calculating costs and quantities.

become available that can automatically measure the more straightforward components of a building, so traditional measurement of quantities will decline.

The programs which are being developed will enable the architect to manipulate form and spaces at an early stage of design, and at the same time to apply and enter and obtain print out. QSs could supply these element unit rates for architects. "With the development of communications and centralised data banks, cost information will become more widely available." As Peter Brandon says, this depends on co-operation between members of the profession.

The success of the BCIS cost data bank, which came "online" last Monday (April 2) hangs to a great extent on QSs abandoning any defensiveness. BCIS has transferred the best of its building cost information collected since 1982 onto its FDP 11/44 mini computer.

Subscribers will link with the BCIS on-line data banks by telephone. They select and retrieve the information they want and store it on their own office micro. Then they can manipulate it to prepare, for example, an approximate estimate.

Douglas Robertson, director of BCIS, hopes the new service will encourage QS practices to standardise computer hardware. BCIS programs will be written in language under the CP/M operating system. CP/M is rapidly becoming a business standard and helps software to be used on various Z80 chip micro.

Douglas Robertson also hopes that increasing numbers of QSs

will offer their own cost data to the service so that BCIS-Online can be constantly updated. "We want QSs to have their own ideas about what they want to do with the data," he adds, "and to make these manipulative programs available to other subscribers."

### Sharing

The BCIS service is non-profit making. Some QSs, however, are beginning to realise also the commercial potential of sharing their "traditional" expertise with other QS practices and with the construction industry as a whole. Co-operation between EC Harris, a large QS firm, and Laings, the contractors provides a vivid illustration.

CATO is a system for the production of bills of quantity and subsequent cost control. It was designed and developed jointly by EC Harris and Edstree Computing, a member of the Laing Group. CATO uses an electronically sensitive drawing board called a digitizer. This scales lengths, perimeters and areas directly into a computer.

It will calculate areas of irregular shape and any documents where the dimensions would normally be scaled such as architectural quantities. The system will support a range of printers, including a "daisy wheel" providing printing suitable for the production of the final bill.

John Allen, Laing's chief quantity surveyor, claims that CATO is the only system that can "take off" from a drawing and produce a bill "It hangs on the professional input of EC Harris. They know what the

contractor."

In Germany, for example, the client receives a price for a project, but not necessarily a lump sum price as in the UK. Work is measured as it progresses and the cost could be constantly changing as a result. "The reluctance of the continental construction industry to even consider standard methods of measurement is due to this basic difference," says Mr Willis.

Ken Milburn is a quantity surveyor for a multi-disciplinary practice working in Europe. He looks forward to the day when everyone throughout Europe is bidding in the same format. Information based on the same criteria could be fed into a central data base.

"I could then access that information by asking the price of a floor slab in Belgium, for example. I would know that the price for a floor slab in Belgium was assessed on the same basis as in the UK."

"We need to convince European contractors and suppliers of building materials that they should price in a certain form." A prerequisite of exchangeable information is, he says, a standardised method of describing and measuring building and engineering work.

"So we must also re-educate those in Europe who perform quantity surveying functions about the need for agreement on principles of measurement."

"We have to accept, however, that we may be trying to change the habits of a lifetime."

If the International Principles of Measurement are kept simple, Mr Milburn says, they must become more widely accepted in Europe.

If language is one of the greatest barriers to international understanding, then the fact that the Principles of Measurement is published in English, French, German, Spanish and Arabic must provide some hope that it may one day find greater acceptance among EEC countries.

The European Commission is moving towards standardising the specification of building materials. The standardisation of building measurements might eventually be considered also. Effective liaison between CEEC and the EEC would assist towards this end.

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Measurement

## Uphill task to achieve international format

"THE SITUATION in 1979 was somewhat chaotic," says Mr Michael Morris, a chartered quantity surveyor practising in the U.S. The RICS itself decided that enough was enough and, drawing on the experience of several quantity surveying firms active in international construction, prepared the International Principles of Measurement.

Expensive misunderstandings and disputes all too frequently occur, Mr Morris explains. The Principles of Measurement, which set out basic rules for measuring, are designed to improve communications within the construction industry worldwide.

Disputes can arise, for example, over simple matters such as the measurement of gross building floor areas. Some countries measure areas to the outside of the enclosing walls. Some exclude covered but unenclosed walkways from the gross floor area, while others include these.

As it is, methods of measurement tend to reflect the conventions in the construction industry of the country of origin and/or the particular requirements of the industry. There is, says Christopher Willis vice-chairman of the standing joint committee for the Standard Method of Measurement, an obvious need for a standard method within the UK system.

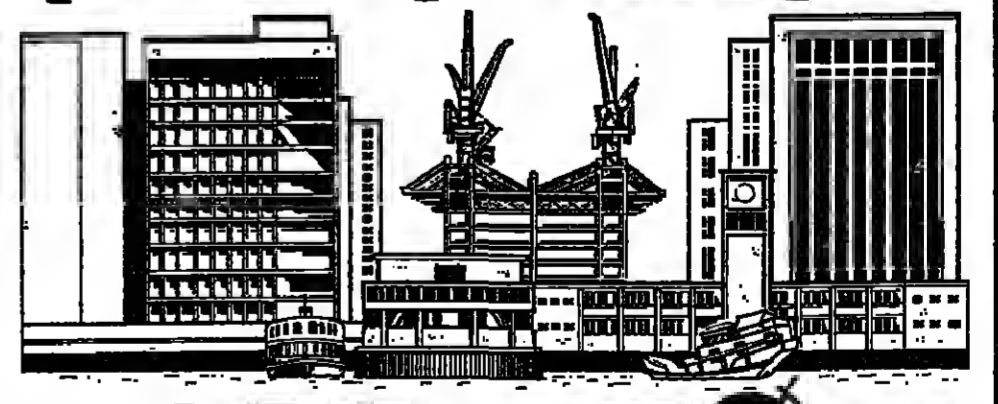
**Benefits**

One set of quantities is prepared by one man for the use of all tendering contractors. The benefits to both the industry and its clients since the SMM was first introduced in 1928 are, he says, well established.

"There is not such an obvious need on the Continent," he says. "These contracts are largely let in line with the U.S. system. A prospective contractor is provided with a full set of drawings and equally full set of specifications of what is required. He is left to his own devices as to how he arrives at his price."

"Although those devices must include some form of measurement, traditionally this has been the choice of the individual

## Boosting Britain's earnings with 'invisibles' - that's the challenge for today's chartered quantity surveyor.



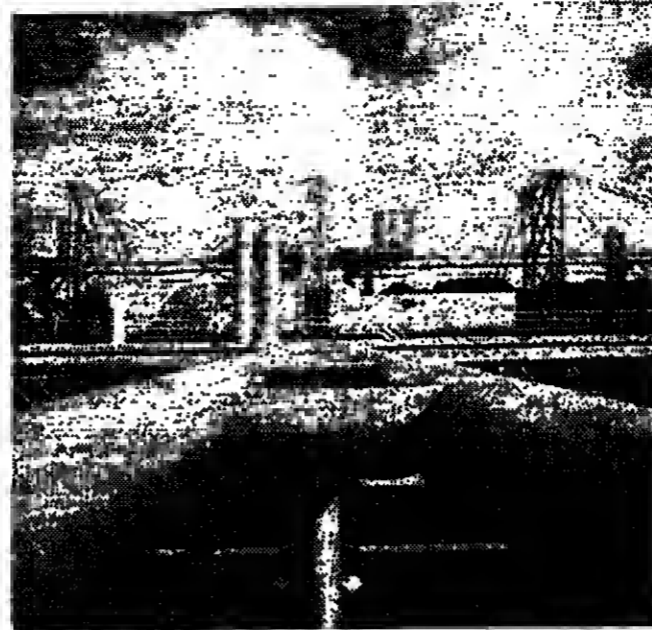
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# QUANTITY SURVEYING VI

The future role

## Towards a multi-disciplinary approach



The James micro-chip fabrication plant, Newport, Gwent. Quantity surveyor: Henscombe Partnership.

THE QUANTITY SURVEYOR'S major role will always be to provide independent advice on costs. His clients are likely to impose increasing demands because of the complexity of the modern building industry and the importance of impartial advice between all the specialist consultants.

Growth areas are also likely to be in management of buildings—maintenance and control of up-to-date environmental information—and mastery of the advanced technology of project management.

One area where the future is less clear to see is the role of the professional in a field where both architects and surveyors have moved into the marketplace. The quantity surveyor can now advertise and compete on fees. Competition creates flexibility and can lead to compromises in professional standards.

The field of employment for the q.s. is now very wide. They are employed by building contractors, sub-contractors, property developers and owners of buildings. The range of clients offers a sign for the future—because they are likely to come from a wide range of backgrounds, sometimes with a detailed knowledge of the whole construction business and sometimes with none.

### Difficulties

There is often surprising ignorance on the part of a client who may be about to make a major investment in a capital building project. He can be on very dangerous ground because the building "procurement" business is fraught with difficulties for the uninitiated.

It is important for the quantity surveyor and for the client that the professional advice is completely independent. The move into the manage-

ment field will certainly change the quantity surveyor's sense of independent responsibility.

The area which is changing most quickly is management contracting. The running and management of construction projects often falls to the quantity surveyor. He has to adapt to the advances in management technology and feel confident about accepting the responsibility for time and cost matters as well as the detailed contractual field.

Many quantity surveyors are now working in multi-disciplinary practices alongside architects and engineers. This is a trend that is likely to continue with an increase in the offer of a total design-and-build package. Could this lead to a merging of the building professions—a move towards a more

combined training and a gradual removal of the distinctions between the various disciplines?

Certainly the more advanced and effective design practices in the UK have always been multi-disciplinary—often the input of the engineer and the quantity surveyor is just as important as the role of the architect. What is less clear for the future is how the designer can influence the increasingly technological world of the consultants. There is a danger that the consultants will impose, in the interests of time or convenience, a design solution that is simply expedient.

There is a possibility of rival design and management groups setting themselves up—some initiated by the architect and some by the quantity surveyor

and the builders. With the likely merging of disciplines—who is to be responsible for the maintenance of professional standards? Already the larger quantity surveying firms with their own data bases and information services score an incomparable advantage over the small architects' offices.

Clients for new buildings are anxious above all to build with speed and economy. Tenders can be invited for a new building before the design is finalised based upon approximate bills. This has been criticised because the design can still be changed—possibly resulting in expensive delays. Full bills of quantities can be produced if the work is designed in detail. Changes to this system which may speed the construction process may well be at the expense of design integrity.

The spread of differing sorts of contracts—management fee contracts, design and build contracts and separate trade contracts—demands the employment of specialist help and the quantity surveyor is beginning to supply it.

In 1986 the long discussion over the future shape of bills of quantities will come to an end with the publication of new proposals for standardising certain forms of measurement. Much of the information that is now available on the bills of quantities could be employed as source of detailed information for cost control and management purposes.

It is in the selection of design options that the quantity surveyor has a larger role to play in the future. Clearly he should not make the selection but the full range of designs with all the cost implications should be presented to the client.

The field of economic analysis of design is a difficult one and there is a danger that design

will be valued only for its economic effectiveness. The end result of that path is the kind of dull architecture with which our cities have been sufficiently blighted for the next century.

### Effective

Economic awareness and the exercise of clear aesthetic judgement is perfectly possible—most major private commissions have erred in England on the side of economic caution and no architectural excitement. It is important for quantity surveyors to acquire a understanding of design as well as an expertise in economic analysis.

The improvements in data storage and retrieval systems have already meant that the average q.s. has access to the most up-to-date cost information service. The present confusion of compatibility in the information systems suggests that it is for the q.s. to control the data base and be the source of standardisation. It would be a helpful development for contractors to know the touch of a button the up to the minute cost of materials and services on a worldwide basis. The shortage of international statistics could easily be remedied.

Will there continue to be a role for the small consultant practice in the face of large scale commercial firms offering cheaper packages? The changes in the building industry mean that there will be parallel changes in professional practice.

The urge to compete and lower prices may heighten professional competence. But it is just as likely that the large construction companies will absorb the q.s. into the broader based multi-disciplinary practice—the new world of the professional under the umbrella of

commerce has yet to be seriously examined.

The quantity surveyor's future may well be enhanced by the decision to allow the profession to advertise. There is insufficient knowledge of what the q.s. actually does. Quantity surveyors are often confused in the public mind with estate agents or land surveyors. Perhaps if the profession entered the debates about the poor quality of much building, the relationship between maintenance and life cycle costing and the need for better contract management, the idea of the quantity surveyor as the potential leader of the financial and construction team would emerge with greater clarity.

Colin Amery

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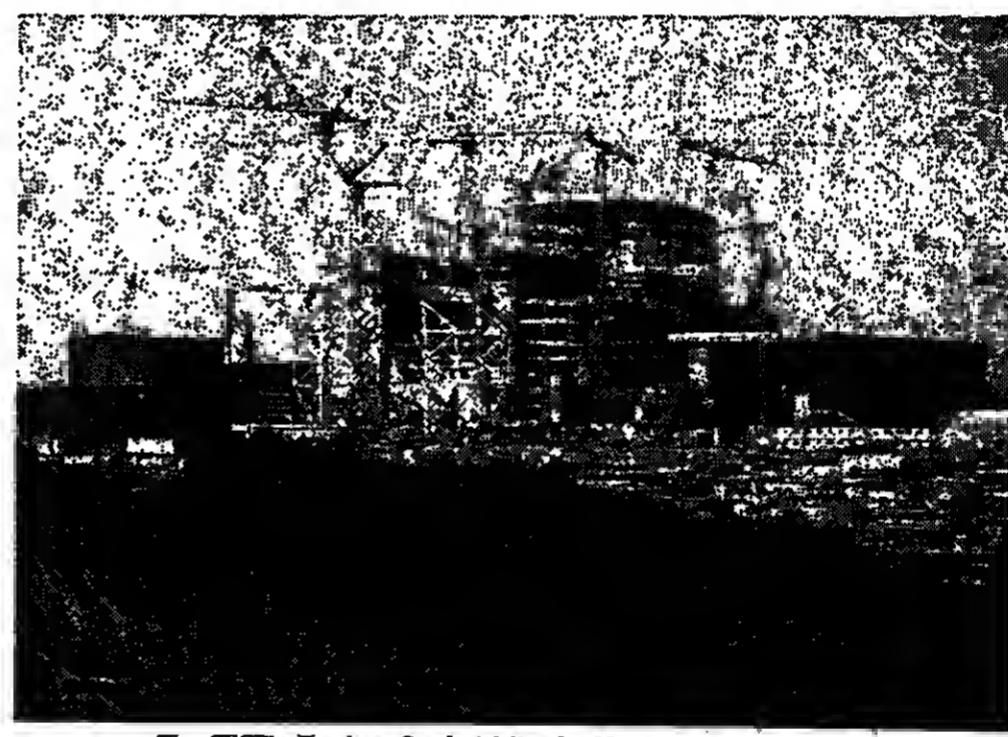
## PROFILE: E. C. HARRIS'S ROLE IN HEYSHAM 2 Keeping the targets in sight

MAJOR CIVIL engineering works, such as nuclear power stations, come into the category of projects where the role of the quantity surveyor is easy to overlook if the construction technicalities alone are considered. Yet the nuclear power station programme in the UK, if it is to "deliver the goods" in terms of ultimately producing more and cheaper power for homes and industry, needs the cool and sober hand of the quantity surveyor to keep it on line, on time, and within cost targets.

This is not an easy goal to reach. Take for example the current contract for the construction of Heysham 2, one of a pair of advanced gas-cooled nuclear reactors in the CEBG's present programme. Although externally the structure looks virtually complete, the construction period is only at the half-way mark. So far construction is both on time and on cost and if this continues electricity should reach the grid in 1988. From then on, Heysham 2's two turbo-generators will be capable of supplying the electrical needs of a city the size of Liverpool; 1,320 megawatts. Until then, however, Heysham 2 has a mind-boggling array of contracts and sub-contracts.

One reason for this is that previous nuclear power stations had been built for the CEBG under turnkey arrangements with various nuclear consortia which took total responsibility for design, engineering and construction of both the nuclear plant itself and the conventional parts of the station outside it. At Heysham 2 the CEBG has assumed direct responsibility for the project.

While the National Nuclear Corporation (NNC) is in charge of the "nuclear island" with some 100 specialist contracts for the nuclear plant itself, the CEBG has a similar number to handle for areas including civil engineering, building, mechanical plant, electrical plant and cabling.



The CEBG's Heysham 2: electricity should reach the grid in 1988.

An additional complication is that while the contractual basis for the building and civil engineering works is the CEBG Standard Form (derived from the ICE Conditions), there are different formulae for the adjustment for post-contract inflation in the case of building, civil engineering, and specialist sub-contract work.

Heysham's "twin" station is Torness in Scotland. At Torness, the quantity surveyors for the building are Gardner & Theobald. For Heysham, E. C. Harris & Partners have that role. However, the employee in both cases, although they are two different electricity boards, made sure that at the early stages of the projects a joint team from both practices was formed to make the most of a combined design for the two stations. The element of common design saved not only design office fees but quantity surveyors' fees as well.

### Competitive

The siting of Heysham 2 was dictated to a large extent by the need for vast quantities of water (some 180m litres per hour) to cool the turbine condensers. That requirement alone resulted in a significant construction project: the water is pumped in from Heysham Harbour via a pump-house built inside a coffer dam 20 metres deep and 70 metres in diameter. The twin tunnels which then carry the water to the turbine hall are 20 metres long, and two further tunnels then discharge the water, after it has cooled the turbines, back into Morecambe Bay.

The contractual basis at Heysham 2 relies on the measurement of the works as executed to establish the final price. Individual contracts and all the nominated sub-contracts were subject to competitive tender-

ing based on bills of quantities. Bills of quantities for the main civil engineering and building works at Heysham 2 were measured in accordance with the ICE Standard Method (1974 edition) and amended version of SMM5. Some building contracts let later in the programme were measured according to SMM6.

Structural steelwork was prepared in accordance with the CEBG's own methods of measurement which the board formulated in conjunction with the British Constructional Steelwork Association.

The main quantity surveying functions as seen and undertaken by E. C. Harris at Heysham 2 are twofold, and both are well within the profession's traditional roles.

One is the measurement of work as executed to establish final quantities. At the same time E. C. Harris advises the Board on the settlement of the final account and recommends interim monthly payments. This is done by a resident team of surveyors, working closely with the contractor, on behalf of the CEBG.

The other is more general cost control, a vital function which begins at the drawing board stage and aims to identify as early as possible all changes and potential changes, so that alternative strategies may be considered and assessed in good time. In this case, a cost-control surveyor was located in the design engineer's offices from the start.

Each month the CEBG project manager receives a cost control report. It includes all design changes and potential design changes. A framework is established by preparing the initial estimate against a standard list of groups and element headings. These are used both in tender preparation

for each contract and in the preparation of documents from interim valuation to final costs.

As the project progresses, the monthly report follows actual expenditure, comparing it with the estimates and updating future estimates as design changes are incorporated.

### Installation

In keeping with the high-technology nature of the reactor projects, the quantity surveying elements are also moving in that direction. The use of computers at Heysham 2 is a good indication of the potential and the way ahead. To begin with, the monthly reports (about 100 pages each) are now produced by an on-site micro installation which not only prints the reports but also sort all cost-plan input, entered as random cost-control sheets for the various contracts.

Computer-aided measurement systems are also taking over. It is now the norm for the more recent contracts, and gradually taking over from the traditional methods on parts of the main contract.

The hardware is an on-site mini, based on DEC FDP 11/23, and the system is CATO. The four VDUs in the present system are to be expanded to allow up to 15 VDUs, based on a Plessey 6700 processor.

The original bills of quantities are stored in a database, and the installation can also record drawings, site instructions, dayworks and station statistics. The output can be bills of quantities, both priced and unpriced. The computer also allows pricing of the measurement as it is passed to the contractor for agreement, and provides continual updating and costing of the final account.

Mila Bar-Hillel

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